ECHO investment

ECHO Health & Safety Requirements

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Revision 33
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REVISIONS

Revision: Issue date:	Changes
Rev. 1. 31-11-2017	• deleting reference to missing appendix "Environmental and Health & Safety Programme" in subchapter 3.1., • changing (unify) the names of appendixes (in polish version), • chapter 5. – "Appendixes list" was added.
Rev. 2. 19-04-2018	• Attachment "Lifting Permit": added explanation in the footer of the Permit, amendments in wording and change of the Checklist for Lifting Operation layout, exemplary template of Lifting Plan has been added, • Attachment "Truck Mounted Crane Checklist" – added point regarding "current UDT inspection (decision)".
Rev 3 23-04-2018	• 4.3.12 Reports added – "Echo's EHS Director sends after analysing, the IAN information, to all Echo Investment projects. Each construction site, upon receipt of the IAN sends back to the Echo's EHS Director a completed part of the IAN report "Required feedback information from site" with actions taken in relation to the given incident".
Rev 4 18-06-2018	• 4.3.2 Added point– "j) All contractors are obliged to provide list of employees and equipment (Appendix Contractor's list of employees and equipment)."
Rev 5 23-08-2018	• 4.4.5 d) Changed sentence " Decking of the scaffolding must be stable without any opening and provided with two tube railings (600mm and 1 100mm above decking) and toe boards with height of 150mm, starting from1m or lower if there is any risk of serious injury."
Rev. 6 11-09-2018	• 4.1 b) Added sentence "As appendixes to the safety project plan elaborate Emergency preparedness plan and Project Risk Register (*Appendix Emergency preparedness plan and Project Risk Register).* • 5 Appendixes list added "16. Emergency preparedness plan; 17.Project Risk Register"
Rev. 7 14-02-2019	• 3.3. added point "h) Architects and designers are obliged to take into account the Design HS Guidelines Checklist document (*Appendix – CDM Design HS Guidelines Checklist)* at the project design phase", • 4.2. point b) and chapter 5.- the name of the attachment has been changed *"Tradecontractor EHS questionnaire"* due to merged documents "Subcontrator HS questionnaire" and *"Environmental assurance consultant contractor supplier"*
Rev.8 20-02-2019	• 4.4.21 added point "g) The use of unguarded rotating cutting tools is strictly forbidden i.e. chain saws or any electrical or power driven cutting implements. In line with EU requirements. The only exception to this rule is when cutting trees."
Rev.9 08-03-2019	• 4.3.2 h) changed requirement about supervision "The presence of one supervisor per 1-10 blue collars is required on the construction site, two supervisors per 11-20 blue collars, etc. (one supervisor per maximum 10 blue collars)."
Rev. 10 29-05-2019	• 4.3.20 c) and in chapter 5: new name of permit "Lifting Permit – Tower Cranes", added new type of permit "Lifting Permit – Mobile Cranes", the "Truck Mounted Cranes Checklist" has been deleted, • 3.2. b) and 3.3. b) the "Design health and safety risk register" name has been changed to "Project Risk Register", • 4.1. b) added sentence "The Project Risk Register which was developed at the design stage has to be analysed by the contractors and Echo supervision team at the construction phase of project", • The subchapter no. 4.3.14. "Near Misses" and attachment in the chapter 5 "Near Miss Card" have been deleted.
Rev. 11 01-07-2019	• The "Assessment and Pre-Qualification of Designers" has been deleted, including the description relating to this Attachment in section 3.1., • 4.3.12. An attachment "H&S Accident Report" has been removed from point c) and j) point added "Accidents of employees employed directly by ECHO have to be reported to the Local EHS Manager on completed H&S Accident Report form (attachment – Accident Report)." • Revision no 1 of "Emergency Preparedness Plan".
Rev. 12 16-08-2019	• Added point 4.3.15 "Awards for blue collar workers" • Added attachments " Awards for safe behaviours – outlines"
Rev. 13 26-09-2019	• Added in point 4.3.9b "It is recommended to use hard hat with chin strap when working at height (protection of the head when falling from height)" • Changed provisions in point 4.3.4. Initial and periodic training
Rev. 14 28-11-2019	• Clarified the content in the point 4.3.6. "Method Statement", • Added content in point 4.4.5.b) referring to the scaff-tag requirement. • Added point 4.4.24. "Power tools" – described obligations in the scope of quarterly power tools and equipment inspections on the project.
Rev. 15 04-12-2019	• Added in point 4.4.9. requirement to provide system edge protection to a higher standard with system metal mesh panels.
Rev. 16 30-03-2020	• Section 4.3.3 has been added. "Days before receiving" (attachment: "Pre-Acceptance Days Health and Safety Rules for Visitors" and "Pre-Acceptance Days Health and Safety Rules for Attendants"). • Section 4.3.17 has been added. "Consultations with employees". • As part of access control added in section 4.3.21. requirement to provide control gates and a monitoring system. • Section 4.3.22 has been added. "Employee identification" • Section 4.4.14 has been added. "Unloading platforms". • In item 4.4.18, guidelines have been added during the installation of the interior of the elevator cabin to protect its components during operation during the construction period.
Rev. 17. 25-05-2020	Adaptation of entries in the document to the structure and requirements of ISO 45001, • • 4.3.10. Personal Protection Equipment – point added e) and f) – requirements regarding essential requirements for PPE and time periods of use.

	• 4.3.17. the scope of consultation with Employees Representatives at ECHO Investment was specified.
Rev. 18 31-07-2020	• 3.1. corrected sentence regards EHS documentation package at design stage, • 3.2. corrected sentence, link to EHS program was deleted, • 3.3.1.f. added content regards appendix "Guidelines – EHS drawings content tender-execution design" • Added subchapter 3.3.2. Guidelines – EHS drawings content tender-execution design, • 4.3.10.c. sentence corrections, • Added subchapter 4.3.11. Personal Protective Equipment – rules for use, • 4.3.19.b. sentence corrections, • Added point 4.3.19.e. – reference to new appendix "Rules of imposing financial fines on ECHO construction sites", • Added subchapter 4.3.21. Construction site layout, • 4.4.1.a. added sentence regards wide excavations securing, • 4.4.9. changed subchapter name "Edge protection and temporary grips (anchor points)", • 4.4.9.a. sentence corrections, • 4.4.9.f. added information regards fixing method of edge protection post grips, • Added point 4.4.9.g., • Added subchapter 4.4.10. Temporary grips and anchor point, • 4.4.19. overall sentence corrections, clarifying the requirements for collective protection and safety equipment, installation of temporary platforms, • 4.4.20. overall sentence corrections, clarifying the requirements for collective protection and safety equipment, • 4.4.21. sentence corrections, • Added subchapter 4.4.22. Works on roofs and flat roofs, • Added subchapter 4.4.23. Securing of works at balconies.
Rev. 19 09-09-2020	• 4.3.19 added point g) Yellow-Red card register
Rev. 20 12-11-2020	• 4.4.17 Added point c), concerning marking of persons appointed to provide first aid – stickers on protective helmets, • 4.4.18 Added information on the use of ladders, steps and landings with handrails, • 4.4.28 Added information regarding the necessity to periodically calibrate instruments for measuring power tools in an accredited laboratory, • Added subchapter 4.4.29. Work environment measurements.
Rew. 21. 21-12-2020	• Added subchapter 4.3.27. regarding "Complaints", • An appendix was added "Complaint Report".
Rev. 22. 04-02-2021	• 4.3.26 Added point c) has been added regarding the trial evacuation of the construction site. • Added point 4.4.8.f) b., c. regards usage pallet crane forks, • Added point 4.4.8. i) Anticollision System
Rev. 23. 13-04-2021	• Added 4.3.28. added "Reporting and project indicators" – a) Carbon footprint monitoring, • 4.4.25. Site Plant and Equipment detailed requirement in the point h) wet cutting and in point i) safety requirements for the machinery equipped cutting saw, • "Excavations permit" attachment was updated • "Permit for lifting – mobile cranes" attachment was updated, • "Przegląd Partnerski-Peer Review" attachment was updated, • "Hot Works Permit" attachment was updated, • In the form "Pre-start meeting agenda", was added point "Cutting and processing of stone, slabs, paving elements and masonry materials with the use of machines and devices" and point "Reporting carbon footprint – the estimating of CO2 emissions".
Rev. 24. 07-06-2021	• Added point 4.4.19 Construction site cargo cranes and passenger lifts, • "Lifting Permit – tower cranes" attachment was updated.
Rev. 25. 28-07-2021	• 4.4.9.f.d. added point about using of traverses, • 4.4.9.i.b. added point – crane anti-collision system to be equipped with supervisor (online) module, • Added subchapter 4.4.1. Works particularly dangerous
Rev. 26 01-10-2021	• 4.3.2.k. added content regarding the documentation and trainings for foreign-speaking employees, • Appendix "Lifting Permit – Mobile Cranes" – simplification of the document, correction of entries.
Rev. 27 18-11-2021	• 4.3.15. added information regarding internal audits, and bonus points for proactive activities on site, • Added point 4.3.21.b. regarding welfare containers requirements.
Rev. 28 21-01-2022	• "Concrete Pump – checklist" content update.
Rev. 29 23-03-2022	• c) Information has been added on detailed guidelines regarding the standard of construction facilities, included in the document "Construction site facilities – Guidelines".

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Rev. 30 13-05-2022	• Added point in 4.4.13.c) – regarding the storage of materials on palets, maximum on two layers, • Added point in 4.3.21.a) – the main transport roads, on the construction site, should be hardened with the concrete road slabs – or alternatively hardened with gravel (elimination of mud and ruts on the road),
Rev. 31 13-07-2022	• In point 4.4.9. i) b. The provision regarding the anti-collision system on the construction site, which should be equipped with an on-line preview mode, has been clarified in order to enable the Echo supervision to check the crane operations on a current basis in the construction office and to reading any errors in the system operation, • Added point 4.4.27 j) Workstations where work is carried out with the use of table saws, bending machines, etc. should be equipped with roofing systems (shelters).
Rev. 32 03-11-2022	• Added content in the 3.3.2.b. regarding securing the works on the roofs and near the technological shafts > 1m2, • Appendix "Guidelines – EHS drawings content in tender-execution design" added content regarding the anchors points and life lines on the roofs and on the individual floors near the shafts, • Appendix "COSHH List – recommendation for use" added columns regarding the scope of works and manufacturer for each chemical substances.
Rew. 33 12-12-2022	• Added requirements regarding the securing of the working at heights – the concreting of the pillars and reincored concrete walls – point 4.4.8 b.

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CONTENT

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1 INTRODUCTION

This document outlines Echo's Health & Safety Requirements (EHSR) with which all personnel working on projects within Echo Investment SA. are required to comply with.
It has been formulated in conjunction with best practices from UK and adapted to the business needs within Echo Investment SA. and construction practices in the CEE. It adheres to the principle that every employee has a right to work in a safe and healthy environment. It also follows the principle that all participants of a project must be involved in health and safety at every stage of the project.

This document has been produced for the use of management and supervisory staff, who are required to bring these standards to the notice of all their employees and other personnel under their control. If there is any doubt or misunderstanding of the content of this document the manager or supervisor should consult with the senior manager for the project or his nominee for clarification. For the sake of simplicity this document has been written in the masculine, but any references to he, his or him will also be taken to include the female gender.

Remember: safety is not something we do to you; it is something we do together for the benefit of each other!

2 LEGAL & CONTRACTUAL COMPLIANCE

Managers and supervisors are to ensure that all personnel under their control conform to the legal requirements of Health and Safety legislation and any other relevant statutory provisions in the markets where Echo Investment SA. is present. Where this document makes reference to current statutory provisions this should be taken to include any subsequent or amending legislation.

This document does not relieve the manager or supervisor from his legal or contractual obligations.

3 DESIGN

3.1 PROCUREMENT OF ARCHITECTS AND DESIGNERS

Design Managers of ECHO Investment S.A. at design development stage are obliged to hand over to the external design offices ECHO guidelines documents for EHS at the design stage,

ECHO EHS Guidelines at the design stage are available on the ECHO BHP Extranet platform (https://extranet.echo.com.pl/BHP.aspx) in the "Design Stage" folder

3.2 CONCEPTUAL DESIGN

a) A building must be designed so that it will not create hazards for the workforce during the construction phase or hazards for tenants, third parties and maintenance staff during the operational life cycle.

b) Architects and consultants shall identify and document risks during the conceptual design in cooperation with Echo Investment SA. Among others, the following shall be assessed: traffic, neighbours, logistics, excavations, substructure, superstructure, lifts, facade including windows and doors, atriums, skylights, roof, etc (*Appendix: Project Risk Register*).

c) All members of the design team will be trained by Echo to become aware of the EHSR.

3.3 DESIGN

3.3.1. GENERAL PROVISIONS

a) As is required during the conceptual design phase, buildings in the design phase must also be designed so that they will not create hazards for the workforce in the construction phase or hazards for tenants, third parties and maintenance staff during the operational life cycle.

b) In accordance local legislation and standards, designers must:

- identify hazards;
- eliminate hazards if feasible;
- reduce the risk by design;
- and provide information necessary to identify and manage remaining risks.

c) Risk and opportunities assessments shall include risks and opportunities that might occur either during the construction phase, maintenance period or during future renovations and finally when demolishing. Architects and designers shall make risks and opportunities assessments and find solutions for specific risks such as:

- external infrastructure, neighbourhood buildings,
- excavations, substructure, superstructure,
- shafts,
- facade including windows and doors,
- window cleaning,
- roof, atrium, skylights,
- logistics, lifts,
- mechanical and electrical installations,
- fit out and other applicable features (*Appendix: Project Risks and Opportunities Register*).

d) Risks and opportunities assessments made in previous project phases shall be included and elaborated. It is desirable that cooperation with the main contractor and applicable trade contractors are initiated at an early stage in the project in order to utilize the combined resources in a project team. The risks and opportunities assessments will be reviewed by Echo Investment SA. but responsibility always stays with the consultants.

e) The architects and designers shall appoint a qualified H&S. The health and safety representative shall support the consultants' project staff, participate in design meetings and approve the consultants' project documents from a safety standpoint.

f) Architects and designers are obliged to take into account the Design HS Guidelines Checklist document (*Appendix – CDM Design HS Guidelines Checklist* and *Appendix - Guidelines – EHS drawings content in tender-execution design*) at the project design phase.

g) Instructions from Echo Investment SA. regarding health & safety shall be followed.

h) Building systems (prefabricated elements) allowing safe erection methods shall be preferred.

i) Design solutions which minimize risks for fall from heights, reduces heavy manual lifts and avoids slippery surfaces, low headroom, confined spaces etc shall be used.

j) Cleaning and maintenance of facades, windows, atriums, skylights and lighting fixtures shall be possible to execute with the use of "alpinists" attached to designed anchor points which form part of the permanent structure, which will be fixed according to anchor system supplier manual. The use of sky lifts, movable platforms or cages are preferable when possible.

k) Health & safety audits may be executed by Echo Investment SA .or third parties at any time.

3.3.2. GUIDELINES – EHS DRAWINGS CONTENT IN TENDER-EXECUTION DESIGN

a) Guidelines – EHS Drawing content in the tender-execution design were developed by the ECHO EHS Departments and ECHO Design Managers (*Appendix - Guidelines – EHS drawings content in tender-execution design*),
b) The guidelines describes solutions that increase the safety in the following areas:
   - Works at height,
   - Shafts and technological openings - an indication of the proposed solutions for collective protection and an indication of dedicated anchor points in the vicinity of shafts with an area of more than 1 m2,
   - Installation shafts,
   - Balconies,
   - Staircases,
   - Roof/flatroofs levels - indication of the proposed solutions for fall protection systems, i.e. anchor points, permanent life line systems.
c) The document "Guidelines – EHS drawings content in tenderexecution design" are subject to ongoing updates, persons who order a tender-execution design documentation are obliged to hand-over latest valid revision of document.

4 CONSTRUCTION

4.1 ROLES & RESPONSIBILITIES OF PRINCIPAL CONTRACTORS RE HEALTH AND SAFETY

a) Plan, manage and monitor the construction phase in liaison with trade contractors.

b) Prepare, develop and implement a written construction health and safety plan and site rules in compliance with legal requirements. As appendixes to the safety project plan elaborate Emergency preparedness plan and Project Risks and Opportunities Register *(Appendix Emergency preparedness plan and Project Risks and Opportunities Register).*

   The Project Risk Register which was developed at the design stage has to be analysed by the contractors and Echo supervision team at the construction phase of project

c) Prepare, develop and implement a traffic management plan with emphasis on 1) design and layout of vehicle routes to minimise the need for vehicles to reverse and separate vehicles from pedestrians; 2) signage requirements; 3) rules for on-site parking; 4) loading and storage areas; 5) loading and unloading arrangements; 6) competence requirements for drivers and plant operators, banksmen / flagmen; 7) the use of reversing aids for drivers – mirrors, cameras, banksmen / flagmen.
d) Provide relevant information to trade contractors regarding the health and safety plan.

e) Make available and maintain suitable welfare facilities during the construction phase.

f) Check site competency certificates of all employees where applicable.

g) Ensure that all workers receive site inductions and are provided with information and training required for safe work on site.

h) Cooperate with all appointed H&S co-ordinators in the project regarding ongoing design.

i) Secure the construction site.

4.2 PROCUREMENT OF PRINCIPAL CONTRACTOR AND MAIN TRADE CONTRACTORS

a) The Environmental and Health & Safety Program of the project or facility shall be followed.

b) The principal contractor and main trade contractors shall be prequalified before agreements are made. Pre-qualifications shall include interviews with intended staff to inform about these standards and investigate their attitude to safety (*Appendix Trade-contractor EHS questionnaire)*. The General Contractor is obliged to ensure that *Trade Contractor EHS questionnaire* will be provided by its contractors.

c) Pre- start meeting with all main contractors should be held (*Appendix Pre-Start Meeting agenda).*

d) For more details see Echo Investment SA. Environmental and Health & Safety Management System Manual (section 9 – Procurement process)

4.3 CONSTRUCTION - MANAGEMENT AND ORGANIZATIONAL ISSUES

4.3.1 **Contractual compliance**

a) Echo's Safety Policy and Echo's Safety Standards shall be adhered to.

b) Instructions from Echo Investment SA. regarding health and safety shall be followed by the principal contractor and the trade contractors.

c) Echo Investment SA. may stop works with risk to health and safety.

d) Instructions from the appointed principal contractor's health & safety coordinator must be followed and implemented.

4.3.2 **Management & supervision**

a) The principal contractor is responsible for the implementation of the requirements of this document with his trade contractors through information, training and follow-up.

b) The principal contractor shall set up a project plan which will be subject to review by Echo Investment SA.

c) The principal contractor is required to appoint a minimum of 1 professional qualified health and safety representative for the construction phase. The level of health & safety support in a project is determined by the size and complexity of the project and is subject to approval by Echo Investment SA.

d) The principal contractor's health & safety representative shall support the project staff, and participate in project meetings and trade contractor coordination meetings. He shall furthermore review and approve the principal contractor's and trade contractors' project documents from a safety standpoint, including method statements and risk assessments for high risk activities.

e) The trade contractors' health and safety representatives shall show evidence of health & safety qualifications. Copies shall be kept on site.

f) Written health and safety instructions shall be available and implemented.

g) Pre-start meeting with trade contractors shall take place before start of work. The trade contractors' project managers and supervisors shall participate.

h) The presence of one supervisor per 1-10 blue collars is required on the construction site, two supervisors per 11-20 blue collars, etc. (one supervisor per maximum 10 blue collars).

i) All persons on site shall have a visible identification card.

j) All contractors are obliged to provide list of employees and equipment *(Appendix Contractor's list of employees and equipment).*

k) Contractors employing foreign-language employees are required to prepare documentation in a language that the employees understand, including:
   a. Method Statements,
   b. Risk Assessment documentation,
   c. Safety briefings, instructions and trainings in the scope of health and safety,
   d. Other documentation within the scope of H&S which are required by polish law and ECHO's standards.

4.3.3 **Pre-acceptance days (visitors/buyers)**

Clients and accompanying persons (visitors) and Attendants on the part of Echo / Principal Contractor should be acquainted with the safety rules that apply on the construction site which are recorded within the document "Pre-Acceptance Days H&S Rules for Visitors" and "Pre-Acceptance Days H&S Rules for Attendants").

4.3.4 **Tenant activities on site**

If tenants will perform activities with their own contractors the minimum requirement shall be followed :-

a) H&S issues in agreement are to be part of contract with tenant

b) Pre Start Meeting with tenant and tenant contractor representatives are to be held not later than 7 days before start of their activity;

c) Method Statement with Risk Assessment to be created by the tenant contractor and submit to Echo for approval before works started (see 4.3.5 and 4.3.6)

d) Method Statement and Risk Assessment must be supplement with applicable rules or procedures (e.g. working hours, logistic arrangements, works coordination etc.) valid on particular site or in building (if applicable). Echo is responsible to highlight those rules before tenant starts his activities, enforce them in daily operations and coordinate works if necessary. If building has received Occupancy Permit and Building Manager was appointed, local arrangements must be described in Project Plan for Facilities and are enforced by Building Management or agreed third party.

e) Adequate and competent Echo supervision to be provided in order to ensure respecting EHSR during tenant activities.

4.3.5 **Induction and training**

a) Personnel of the client, third party visitors, the principal contractor and trade contractors employees that work on site or visit it regularly shall have a full EHS induction training carried out by the principal contractor before or when entering the site.

b) Site supervisors will be subject to SOT (Supervisor Orientation Training) according to training plan elaborated by EHS Echo department.

c) General Induction Training and Periodic Training will take place in accordance with applicable Polish regulations.

d) All training shall be recorded and include a signature of the person showing that he/she has received training.

4.3.6 **Risk assessment**

a) Risk assessments shall be done for all works and must involve team leaders. Assessments may be subject review by Echo.

4.3.7 **Method statement**

a) Method statements have to be developed before the start of works on project (ECHO Construction Site),

b) Developed Method Statement have to be handed over to Site Manager and ECHO EHS Coordinator or ECHO representatives on the project,

c) Precondition to start the works is to develop and accept Method Statement. Method Statement can be accepted by contractor direct supervor or other contractor (employer) supervision representative,

d) The contents of each method statement shall be as follows

1. Planned date and place where works will be carried out, with particular emphasis on work performed at night shift,
2. Adverse weather conditions requiring the suspension of works,
3. Scope of works divided into individual sequences, started from components and equipment delivery on site, lifting operations and horizontal transport, build in the object,
4. The list of Particulalry Hazardous Works which can occur during performing the works – with an indication of persons ensuring constant supervision,
5. The list of machines, devices, tools and access/egress equipment required to carry out the works – with an indication of qualifications required to operate them (if justified),
6. Described schemes and methodology to protect employees and third parties against hazards (collective protection measures and individual protection measures),
7. List of chemical substances classified as hazardous which will be used during the works. As an attachment to Method Statement, the COSHH cards have to be developed based on Material Safety Data Sheets,
8. Temporary and permanent lighting on the pedestrian aisles and work stations at the construction site,
9. Described emergency procedures.
10. Attachments.

e) Before start of works it is required that Contractor will provide (as an attachment to Method Statement) the list of employees acquainted with MS, including their signatures,

f) Accepted Method Statement have to contain the developing date, name of the project (construction site) where the works will be carried out, signatures of persons

developing the document, and signatures of persons with whom Method Statement was agreed,

g) The Risk Assessment has to be provided as an attachment to Method Statement or individual document which will cover the works carried on specific construction site,
h) ECHO on the project reserves the right to check the contractors Method Statements on demand,
i) Lack of developed and approved Method Statement or missing proof that employees were acquainted with MS will led to immediately suspension of works.

4.3.8 **COSHH (Control of substances Hazardous to Health) Assessments**

As part of the method statement the Trade Contractor shall list all hazardous products to be used in that operation and provide a COSHH Risk Assessment and manufacturer's data sheet for each product .*(Appendix Control of Substances Harmful to Health)*

The COSHH coordinator shall carry out a review of its suitability as part of the method statement approval procedure. Where a prescribed product may affect others, the COSHH Co-ordinator may ask for alternatives or ensure that all necessary information is passed to all Trade Contractors. If the contractor is unable to produce an assessment then the activity shall not commence**.**

Operatives must be briefed on use of chemicals related with the task they performed by their supervisors, information on using chemicals must be recorded for a particular task. Operatives should be provided with COSHH assessment card by his/her supervisor directly. It is strictly forbidden to permit work without briefing the operative on using the chemicals and without establishing the controls described in COSHH assessment.

As rule of thumb it is accepted that operatives should have a COSHH card with him/her at his workplace. COSHH assessments should not to be kept in chemical storage areas. Any exception from this rule must be important and agreed with local Echo H&S Manager.

Control over chemicals must be ensured all the time by site supervision at each workplace where chemicals are used. That responsibility cannot be passed on operatives.

4.3.9 **Toolbox talks**

A minimum one toolbox talk per month, applicable to work on site, is to be carried out by trade contractors'' supervisors. A register of participation shall be kept.

4.3.10 **Personal Protection Equipment (PPE)**

a) Employees, sub-contractors and the public must wear appropriate PPE when on Echo job sites.

   The following PPE is mandatory: hard hat , high visibility vest, safety shoes, safety glasses + gloves. The only exception to this requirement will be situations where documented risk assessments demonstrate there are no risks to individuals. (i.e. high visibility may not be required indoors, if determined after a documented risk assessment)

b) Additional PPE shall be worn if identified by risk assessment. It is recommended to use hard hat with chin strap when working at height (protection of the head when falling from height).

c) Work with harnesses shall be avoided as far as possible. Other methods should be considered. Only certified full body harnesses with fall restraint lanyard and load indicator may be used. If harnesses will be used, the person shall have training in how to use the harness and lanyard (checking equipment, anchor points, lanyards, length of lanyard, restraint method, life lines etc.). Anchor points are to be defined by supervisor. If harnesses are in use, at least one other person shall be available on site with rescue equipment and knowledge and training in use of the equipment. Fall arrest lanyards should only be used as a very last resort.

d) Hard hat colour code
    1. Manager/Supervisor: White
    2. Signaller: Blue
    3. H&S: White
    4. Visitor: Red
    5. Blue collar workers: Yellow

e) All PPE's provided and used on ECHO projects have to be comply with essential requirements in the scope of health and safety – thus PPE's have to have CE declaration sign.

f) The following types of PPE's:
    1. Safety helmets,
    2. Footwear,
    3. Protective clothing,
    4. Personal equipment against falling down,
    5. Eye protection and face protection – rules of use are determined in 4.3.11.
    6. Respiratory protection,
    7. Hands protection,

are subject to the conditions of use and replacement, in accordance with the manufacturer manual (in accordance with the guidelines described in the instructions for use).

4.3.11 **Safety glasses – rules of use**

a) Safety glasses are basic protection against splashes and shards that can damage the eyes. They also protect against dust, high intensity light (using appropriate filters) and against with chemical substances,
b) Every employee should be equipped with safety glasses so that they can be used when necessary,
c) It is allowed to use other options for eye protection depending on the work environment, risk assessment, e.g. face shields, safety goggles, shields and welding helmets,
d) The use of corrective-safety glasses should result from the recommendations of the occupational medicine doctor and e.g. risk assessment,

e) Glasses used at Echo Investment construction sites should meet the 1F requirements for compliance with EN166 and have the CE mark,
f) For the safety of employees, a list of activities has been developed during which it is required to use safety glasses on the construction sites of Echo Investment:
   - Spraying paints,
   - Plastering works,
   - Pouring the concrete;
   - Reinforcement works near unsecured / protruding bars;
   - Using compressed air - flushing floors and reinforcements;
   - Making floors from epoxy resins (if the manufacturer does not require the use of tight protective goggles);
   - Hitting with hand tools, e.g. a hammer, pickaxe, etc., on other materials, structural elements where chips may form;
   - Operation of power tools (grinding, drilling, cutting, forging, cutting, grooving);
   - Whenever it is mentioned in the Method Statement and Risk Assessment of the contractor for works for a job or task;
   - Whenever it is listed in the Material Safety Data Sheet or COSHH risk assessment.
g) All employees/visitors should always have safety glasses with them and wear them when carrying out the work as above or when they are in their danger zone (places where exist risk of eye injury).

4.3.12 **Language**

If a worker does not communicate in the local language the following shall apply:
a) all documents and written instructions shall be translated;
b) translated inductions shall be carried out;
c) risk assessments and method statements shall be translated;
d) translated toolbox talks shall be held;
e) one worker who can communicate in the local language shall work together with a maximum of 12 workers, who do not have the communication ability. The number is valid if they are working within the same area and within eye sight. Otherwise the number is to be specified in the method statement or risk assessment.

The above is the responsibility of the trade contractor.

4.3.13 **Peer reviews**

Documented peer reviews shall be performed on a weekly basis. Reports shall be delivered to Echo Investment SA. (*Appendix Peer Review - Health and Safety Inspection Checklist*).

4.3.14 **Reports**

a) All accidents must be reported to Echo Investment SA. investigated accordingly and have action taken to prevent a reoccurrence.
b) Following a fatality, dangerous occurrence or major injury, the accident location must be left undisturbed.

c) All accidents, which result in injury, must be recorded in the Accident filing system controlled by the principal contractor.

d) All accidents notifiable to the authorities under the regulations must be reported to Echo Investment SA. It is the trade contractor's responsibility to complete and submit the accident report to the necessary authorities.

e) A copy of the statutory report must be provided to the site management as well as Echo Investment SA.

f) Any serious accident or any accident to a member of the public must be reported immediately to the site management and to Echo Investment SA.

g) The trade contractors must provide copies of their internal accident report to the site management as well as Echo Investment SA. within a reasonable timescale and co-operate fully in any investigation conducted by Echo Investment SA.

h) Fatalities shall immediately be reported to Echo Investment SA. CEO. EHS Director. Project Manager, EHS representative.

i) IAN report is introduced for reporting serious incidents / near misses. Serious incidents shall immediately (within 24h) be reported to Echo's EHS Director. Echo's EHS Director sends after analysing, the IAN information, to all Echo Investment projects. Each construction site, upon receipt of the IAN sends back to the Echo's EHS Director a completed part of the IAN report "Required feedback information from site" with actions taken in relation to the given incident.

j) Accidents of employees employed directly by ECHO have to be reported to the Local EHS Manager on completed H&S Accident Report form (attachment – Accident Report).

4.3.15 **Audits**

Health and safety audits, following procedures and standards, may be executed by Echo Investment SA. or third parties at the site.
As part of the internal EHS ECHO's audits, the project receive a final assessment / score for the internal analysis of the ECHO's EHS Department purposes. The assessment / scoring criteria take into account observations (areas for improvement) and nonconformities requiring the implementation of corrective actions. The audit grade also includes bonus points that are included in the final score. Bonus points are a reward for proactive health, safety and enivornmental activities undertaken by construction sites, as follows:

- Innovations implemented in excess of the required standards and basic good practices of Echo;
- Best practices that have been published in: the quarterly newsletters, guides, guidelines and other Echo EHS publications;
- Applications, distinctions and awards won in the National Labour Inspectorate competition "Build Safely".

4.3.16 **Project Health & Safety Meeting**

Trade contractors are required to attend a mandatory monthly progress meeting where health and safety standard will be discussed, attendance shall be at the level of project manager or equivalent.

Echo Investment SA. representatives shall have the right to attend all meetings regarding health and safety.

4.3.17 **Awards for blue collar workers**

In order to promote the safety culture, Echo Investment SA construction sites run a system of rewarding blue collar workers under the name "Awards for safe behaviours". Prizes will be awarded to employees who demonstrate exceptional care in compliance with health and safety regulations, report observations and threats to supervision, and contribute with their attitude and ideas to improving the level of safety. Detailed conditions for awarding prizes are described in the attachment: "Awards for safe behaviours - outlines".

4.3.18 **Consultations with employees**

a) As part of improving the EHS management system, Echo Investment SA will ensure consultation regards EHS issues with employees. Therefore, once a month a meeting with employees has to be carried out, during the meeting any information, comments or conclusions will be collected from employees.. This meeting can be combined with the monthly hanging over of H&S Awards . All topics will be recorded on a dedicated board in accordance with the Echo standard.

   Consultation and employee participation activities also include:
   1. participation in the EHS committee;
   2. consulting with the HR department;
   3. participation in Health and Safety reviews of construction (Peer Reviews);
   4. participation in corrective actions regarding incidents and lost time accidents;
   5. participating in construction coordination meetings.

b) Employees Representatives in ECHO Investment are participated in:
   - consultations and meetings regarding working conditions,
   - consultations and meetings regarding the improvement of H&S conditions,
   - forwarding an employee requests to the Management Board and EHS Department aimed at improving H&S conditions in the organization, participation in determining actions to eliminate hazards and reduce H&S risks,
   - the development of the Safety Policy,
   - hazard identification and the development of occupational risk assessment.
   - consultations regarding competences, training needs and evaluation of trainings quality,
   - determining the way of communication, scope of information to communicate in the organization,
   - determining supervision measures and their effective implementation and application,
   - analyzing incidents and non-conformities and determining corrective actions.

4.3.19 **Violations**

a) Echo Investment SA. projects operate a violation procedure, which allows site management to formally record breaches of site safety rules or breaches of statutory law by either individuals or trade contractors on site. Safety violations will be issued as a result of the following**:**
   - where personnel are found working in a manner that places themselves or others at direct risk of serious injury or death;
   - where personnel, after receiving a verbal warning, continue to break site safety rules;
   - any form of discriminatory harassment.

b) The issue of a safety violation will be deemed to be a formal written warning. A copy of the violation will be sent to the recipient’s employer.

c) Any person who receives a safety violation will attend a site safety induction the next working day accompanied by their supervisor. The person will be re-briefed by principal contractor on the relevant method statement.
d) Any person, who re-offends, after receiving the first safety violation, will be removed from site and/or financial fine will be obtained for employee employer,
e) Financial fine (according to point d.) have to be obtained in line with appendix (*Appendix - Rules of imposing financial fines on ECHO construction sites)*

f) Where an incident is deemed to be Gross Misconduct the person will be removed from site immediately. The following are examples of Gross Misconduct which will result in instant removal from site:
   - sexual harassment or racial abuse;
   - bullying, threatening or aggressive behaviour;
   - theft;
   - unauthorised access to restricted areas;
   - unauthorised operating of plant & equipment without required qualifications;
   - tampering / altering safety equipment i.e. barriers;
   - endangering lives including own person.
g) Additionally EHS Coordinator or Site Manager should maintain „Yellow-Red card register" related to the identification of current violations of health and safety regulations by construction workers in accordance with the Echo standard.

4.3.20 **Drug and alcohol policy**

The following applies to all persons working at or visiting a Echo Investment SA site:

a) do not report for or work under the influence of drugs or alcohol;
b) do not bring alcohol or illegal drugs on to work sites;
c) inform your line manager if you are taking medication, which may affect your ability to perform your role;
d) never drive or operate machinery if you are affected by alcohol, drugs, prescribed or over the counter medication.

The following drug and alcohol testing may be carried out:

a) for new employees prior to or soon after commencing employment;
b) on a random / unannounced basis;
c) where there is cause following a serious accident / incident;
d) random / unannounced testing and 'for cause' testing covers anyone on Echo Investment SA. premises or sites;
e) alcohol limit –0 mg per 100 millilitres of blood;
f) drugs – no acceptable limit for any illegal drugs. The only acceptable medication is that taken in line with a doctor allowing work.

4.3.21 **Construction Site Layout**

a. When planning construction works on the project, the following requirements for the organization of the construction site must be met:
- Securing storage yards - with their separation in a safe place, including signage and marking,
- Separating pedestrian routes from vehicle roads, using temporary barriers,
- Tower cranes - analysis of the location of tower cranes regards potential collisions with other cranes and the existing infrastructure (e.g. existing buildings, overhead power lines, etc.). Instructions for work in collision conditions and the correct marking of cranes must be provided,
- Location of the construction welfare and office area - avoid placing the welfare containers in hazardous areas (e.g. the range of a working crane),
- Road traffic on the construction site - if possible, preliminary consider is the possibility of organizing one-way traffic (reducing the risk of employee hits when reversing and maneuvering of vehicles), providing road markings, as well as entry and exit gates,
- The main transport roads, on the construction site, should be hardened with the concrete road slabs - or alternatively hardened with gravel (elimination of mud and ruts on the road),
- The general contractor is responsible for the implementation of the above requirements.

b. Requirement for construction site welfare containers:
- It is required to use a unified system of social, office, sanitary and storage containers - when it is necessary to stack them,
- Container users and contractors using the welfare and storage containers are obliged to enforce the ban on drying clothes and work equipment on electric heaters. Each of the containers where employees change their clothes should be equipped with a stand - a dryer for clothes and work equipment,
- It is forbidden to use electric devices - kettles, toasters, etc., which are technically inefficient and do not meet the requirements in this regard,
- Each of the containers must be equipped with a fire and smoke detecting and signaling device (smoke detectors).

c. Detailed requirements regarding the Echo Investment standard in the organization of premises and hygienic and sanitary facilities at construction sites are included in the document: "Construction site facilities - Guidelines".

4.3.22 **Fencing**

Fencing requirements are to be determined by risk and opportunities assessment. As a rule of thumb the following applies.

a) For short durations of up to two weeks or where work areas continually move, mesh panels fence may be used. Where there is public interface, solid fence panels must be used.

b) In educational establishments the minimum panel height is 2 m and the panels must be solid, not mesh.

c) For longer durations up to 6 weeks and/or where individual fence panels require removing for occasional access in addition to the gate access, mesh panels fence secured to vertical scaffold poles embedded into the ground with concrete should be used.

d) For works in excess of 6 weeks, permanent boarding solutions should be sourced.

e) All boardings are subject to the safety inspection procedures.

f) All gates are to have a security mechanism. All personnel will be issued with a security pass which will be logged each time access and egress is made.

4.3.23 **Security, CCTV and site access control**

a) On arrival to site, all visitors are required to report to the main security gate. All visitors must receive basic visitors' induction.

b) 24 hour security guard cover and using proper turnstiles, card access control system are to be provided.

c) In order to improve safety and to ensure effective anit-theft protection of property the CCTV system should be provided,

d) Access for vehicles (mainly for delivery of the material) will be secured by the principal contractor. When vehicles enter a site, site security or the equivalent will help to navigate in and out of the site.

4.3.24 **Employee identification**

All employees on the construction site should have a personal ID card, which should contain employee full name, contracting company name and project name.

4.3.25 **Permit to work**

Permit to work (*Appendix Permit to Work*) shall be issued for high risk works such as hot works, excavation work, and work in confined spaces, among others.

a) A permit to work can only be issued by competent professional with adequate training in the use of the system and knowledge of the job to be done.

b) He must have authority to take action (refuse to issue, withdraw & close) if necessary.

c) Before issuing the permit, he should satisfy himself that all necessary precautions have been taken. These will depend largely on the type of permit and the potential risks.

Works required Permit to Work are:

- Lifting Permit – Tower Cranes
- Lifting Permit – Mobile Cranes
- Hot works
- Works in confined space
- Excavations

Following activities require additional supervision using dedicated checklists:

- Concrete Pumping Checklist

Works cannot start until working conditions and equipment are checked using Permit to Work or safety checklist and workers involved received pre-task briefing.

4.3.26 **Fire protection and emergency plan**

a) A fire protection and emergency plan shall be formulated before start of site works and kept updated during the entire construction period.

b) The plan shall be consistent with the fire safety precautions and shall include the following:

- procedures for reporting emergencies to the fire department;
- procedures for emergency notification, evacuation and/or relocation of all persons in the building under construction and on the site;
- procedures for hot work operations, management of hazardous materials and removal of combustible debris and maintenance of emergency access roads;
- floor plans identifying the locations of exits, exit stairs, exit routes and portable fire extinguishers;
- site plans identifying the designated outdoor assembly areas for each evacuation route;
- site plans identifying required fire apparatus access roadways and on site fire hydrants;
- the name and contact phone number of the person(s) responsible for compliance with the fire protection plan.

c) Each construction site (separate construction permit) should carry out one trial evacuation of the construction site (however, at least once every 2 years). The local fire brigade must be informed in advance about the planned evacuation action.

4.3.27 **Complaints**

a) The Site Director or Project Manager is entitled to accept complaints and requests, submit explanations or conduct talks with stakeholders (neighbors, local community, security services). None of the other employees of Echo Investment and subcontractors has the right to talk to stakeholders (unless it is the scope of his duties),
b) A construction worker, to whom a stakeholder makes a request, complaint or inquiry, is obliged to indicate that he is not authorized to provide such information and send him to the Site Director or Project Manager (preferably with his name). Such a situation should be reported to the Site Director or Project Manager personally or through the direct supervisor. Speaking in such situations without the consent of the Site Director or Project Manager, using offensive or disrespectful words in a conversation with stakeholders is strictly unacceptable, regardless of the reason for the conversation or the stakeholder behavior.
c) In the case of journalistic inquiries, all comments or answers should be provided through the press office of Echo Investment. Site representatives are not authorized to talk to media representatives on their own.
d) In the case of expected construction issues related to the neighbors, local community or other stakeholders (e.g. noisy night work, repeated complaints about the nuisance of construction site, difficulties regards to entry / exit etc.), the Site Director or Project Manager should contact the ECHO Marketing Department associated with given project or with the communications department to jointly develop a method of conduct or remedies.
e) Any received complaint on the project have to be recorded on the “Complaint Report” template.

4.3.28 **Reporting and project indicators**

Carbon footprint monitoring

a) The contractor is obliged to conduct ongoing monitoring on the project, regarding CO_2 emissions (carbon footprint). Recorded data will concern vehicles delivering materials for construction site and waste recipients' vehicles:
   - Mileage – delivery distance from the starting point (loading place) to the construction site,
   - Vehicyle type (due to the engine capacity),
   - Type of transported material,
   - Name of the contractor for which the delivery of materials / waste removal is carried out.

b) The gathered data will be entered into the on-line form (via website).

4.4 CONSTRUCTION - PREVENTION OF HAZARDS

4.4.1 **High Risk Activities**

High Risk Activities are as follow:
- construction, demolition, repair and assembly works without suspension of work place facility operation,
- Work in tanks, channels, interiors of technical devices and other dangerous confined spaces,
- Work using hazardous materials,
- Works at heights,
- Lifting operations involving tower cranes and truck mounted cranes, in collision working conditions.

The Contractor have to determine detailed H&S requirements during performing high risk activities and develop theMethod Statement, additional steps have to be undertaken:
a. Direct supervision to be ensured for the workers performing the works,
b. Appropriate control and protection measures,
c. Training for the workers, including:
   - Work tasks addressed to individual workers,
   - The order of performing tasks,
   - H&S requirements for individual work tasks.

The contractor ensures, that only only authorized and properly instructed persons have access to particularly dangerous works.
High risk activities must be performed in a team of at least two people in order to providing protection.

4.4.2 **Excavations**

a) Wide excavations carried out for the purpose of the building foundation structure and in which the works will be carried out, must be secured by the contractor, in accordance with the approved excavation protection measures determined in the Design Documentation. Particular attention should be paid to the adopted system of securing the excavation walls, ensuring safe sloping and securing slopes against soaking with rainwater and landslides.

b) Before excavation begins, all objects outside the excavation area that could cause a cave-in must be supported or moved a safe distance away. System barriers, signs or flashing lights must be provided to protect the excavation site. Access to the area must be restricted to workers.

c) Special safety issues:
   - Equipment should only be operated by trained workers.

- Work should not be performed on faces of sloped or benched excavations above workers without protecting workers at the lower levels.
- Drainage must be provided whenever work is performed in excavations where water is accumulating or can accumulate.
- Stairways, ladders, and/or ramps must be provided in all trenches that are more than 1 m deep. Means of access/egress must be positioned so they are no more than 5 m from any worker inside the work area and must be within the excavation supports. Earthen ramps are acceptable for egress only if a worker can use them while walking in an upright position.

d) To reduce the risk of overload, the following measures should be regarded as best practice:

- All spoil from an excavation should be located at least 1,5 m away from the edge of the excavation.
- All digging within a distance of 1 m from a scaffolding structure is strictly prohibited.
- The edge of the spoil heap should be at least the same distance away from the excavation as the depth of the pit if deeper than 1,5 m. E.g. if the excavation is 3 m deep, the spoil heap should be 3 m away.
- Loose boulders should be pushed into the spoil heap to prevent them from rolling down into the excavation and causing injury.
- Temporary support structures must be increased if the excavation is adjacent to buildings and other structures.
- Excavations on roads must always take account of the weight of passing vehicles.
- Vehicle routes must be planned so as to maintain a safe distance from the excavation edges at all times.

4.4.3 **Overhead power lines**

a) If work is adjacent to overhead lines, the contractor should liaise with the appropriate authorities and the local electricity supply company for competent advice on safe heights and distances.

b) The use of “limiters” shall be considered to limit the degree of elevation on a boom or excavator arm from coming close to an overhead power line.

c) A supervisor should be present at all times when working close to overhead power lines.

d) Secure competence requirements for all stages of the work.

4.4.4 **Underground electrical supplies**

a) Establish with the utility owner the safe working distance and controls for avoiding contact with underground services.

b) It is crucial to locate and identify underground services during the design phase.

c) Secure competence requirements for all stages of the work.

d) Methods to locate, identify and mark underground services established.

e) Identify safe digging practices – permit systems, trial holes, use of hand tools.

f) Adequate personal protective equipment must be used at all times.

g) A supervisor shall regularly control the safety of the workers.

h) Emergency response preparedness must be planned before starting work

4.4.5 **Work in confined spaces**

a) A permit to work is required to work in a confined space.

b) A risks and opportunity assessment including checking of gases shall be made.

c) Evacuation ways shall be organized and information given to the workers.

d) Rescue equipment shall be available and staff trained in handling the rescue equipment shall be present on site.

e) A pre-task briefing shall be carried out before start of works.

f) A supervisor shall regularly control the safety of the workers.

g) A top man lookout should be in attendance at all times while personnel are in the confined space.

4.4.6 **Scaffoldings**

a) All scaffolding should be erected, dismounted and altered by experienced qualified scaffolders under competent supervision. Method statements must be prepared and static calculations be provided for high scaffoldings.

b) When scaffolding has been erected it must be checked before being taken into first use and after any substantial alteration and after any event likely to have affected its strength and stability and in regular period not longer than 7 days from previous inspection. Each scaffolding on site will be equipped with scafftag which containing following data: scaffolding user, errection date, basic technical data, 7day checks entries. If the scaffolding is incomplete, damaged of temporary excluded from use it is required put the legible sign in visible place “Do not use/Access to scaffold forbidden”.

c) Wherever possible prefabricated system scaffolding is preferred before non-tube scaffold.

d) Decking of the scaffolding must be stable without any opening and provided with two tube railings (600mm and 1 100mm above decking) and toe boards with height of 150mm,

starting from1m or lower if there is any risk of serious injury.

e) The maximum distance between walls and scaffolding allowed is 200 mm; otherwise supplementary railing has to be provided towards the wall.

4.4.7 **Mobile Scaffold Towers**

Mobile tower scaffolds will be erected, controlled and used in accordance with the manufacturer’s instructions under the supervision of a competent person. All wheels must have an adequate locking system. Moving the mobile scaffold towers with people on is strictly prohibited.

4.4.8 **Formwork**

a) Formwork must be erected and dismantled under the supervision of a competent professional – a formwork coordinator. The appointed coordinator is responsible for

ensuring that correct formwork procedures are followed and that operations are carried out safely. Before erection begins, a risk assessment should be carried out and a method statement should be prepared.

b) System protection should be used when working at heights when concreting reinforced concrete pillars and walls: guardrails and steel working platform or ensuring a high H&S standard of other access equipment (e.g. scaffolding).

4.4.9 **Lifting operations**

a) Generic lifting plans shall be made for all regular lifting operations performed on site (tower cranes, mobile cranes, truck mounted cranes) and shall be observed by all parties. Lifting Plan should be included in the Method Statement and Risk Assessment for each relevant scope of construction works. A Permit to Work is required. (see 4.3.19).

   Lifting Plan has to be developed as a part of lifting permit for a tower cranes.

b) For non-regular operations Task specific lifting plan shall be prepared in form of Method Statement with Risk Assessment. Document must be approved by Echo's Site Manager before operation takes place. Permit to Work is required (see 4.3.19).

c) Excavators must be fully fitted with check valves on the hydraulic arms when used for agreed lifting activities.

d) Operators of lifting equipment shall have special training and license to operate the lifting equipment required by local law (if applied).

e) Lifting Coordinator should be appointed on each Echo site and should be approved (competence and experience) by Echo. His/her main tasks are :

   a. To create and maintain lifting schedule on site and coordinate all lifting operation on site together with Site Manager and contractors representatives,

   b. Make sure that generic lifting plan is up-to-date and review it if necessary,

   c. Check competences of crane operators, signallers and slingers and train them if necessary. As minimum a training on lifting requirements stated in Generic Lifting plan must be performed,

   d. Deliver TBT for Crane Operators, Signallers and slingers

   e. Issue Lifting Permits for all lifting operations on site, helps to prepare Method Statement with Risk Assessment for that operation,

   f. Makes sure that lifting accessories are inspected on regular basis,

   g. Supervise all documentations related to lifting operations e.g. lifting permits, licenses, service books, and make sure they are up to date.

f) Load Slinging

   a. Only specially trained persons –signallers and slingers - may sling loads that will be lifted,

   b. Transport of loads on the pallets, in particular blocks / hollow bricks / bricks for masonry works, should be carried out using pallet crane forks. Special attention to be paid to additional horizontal strapping of the load with a tightly fastened transport belt or certified chain around the transported load on the pallet. The belt / chain have to fixed in way to avoid horizontally movement of the load (before fastening the load, it should be strapped twice on the pallet crane fork post – or permanently fixed to it),

c. Additionally the use of the pallet crane fork should be carried according to the manufacturer's instruction.

d. For the transport of long reinforcement bars (bar bundles longer than 5m), dedicated traverses should be used, which will minimize the occurrence of large opening angles and significant deflection of the transported load.

g) Signaller

a. Only signallers are allowed to communicate with Crane Operators and give him/her orders during normal operations.

b. Signallers should be approved by Echo (competence and experience). Signallers report to Site Manager and Lifting Coordinator only.

c. Main task of Signaller is to make sure that material is safe to lift. His/her duty is to refuse lifting to commence if in his/her opinion it is unsafe to lift.

d. Signallers are to be distinguished with blue helmet

e. Signallers must have refresher training every 3 years

h) Slingers

a. Slingers are only allowed to prepare elements / materials for lifting and to help signaller in the operation e.g. help in sling the load or guide lifted materials through the site

b. Slingers must be trained as a minimum on requirements stated in Generic Lifting Plan. If local law requires additional training for that position, it must be obeyed and supervised by Lifting Coordinator

c. Slingers must be approved by the Lifting Coordinator

d. Slingers must have refresher training every 3 years

e. The number of slingers allowed on project must be agreed by Echo's Site Manager, Lifting Coordinator and Safety Manager. This must be kept to minimum level.

i) Anti-collision systems

a. In the case of collision conditions of working tower/truck mounted tower cranes, the anticollision system has to be fixed on them.

b. The anti-collision system operating at construction site should be equipped with an on-line preview module in order to enable Echo`s supervision the ongoing verification in construction site office of the crane operations carried out and the reading of possible errors in the system operation.

4.4.10 **Edge protection and temporary grips (anchor points)**

Safe working at height standard by Echo shall be followed and all edges where a person or materials can fall will be protected in accordance with the following:

a) Leading edge must be protected with system solutions at every edges: ceillings, balconies, lift shafts, openings, installation shafts, roofs, etc.

b) Guardrails shall be provided to a minimum height of 1 100 mm, incorporating toe boards. The guardrails and toe boards may not have vertical gaps exceeding 450 mm.

c) Where powered mobile equipment is likely to be used, physical stops must be provided to prevent mobile equipment from reaching the edge of the slab and / or impacting the edge protection.

d) Edge protection will be erected, maintained and dismantled by competent persons.

e) Edge protection must be inspected prior to use and after alteration, repair, maintenance, adverse weather or periods of use in excess of 7 days. Inspections must be conducted by an approved competent person and a record kept.

f) Edge protection must be provided to a higher standard with system, metal mesh panels. Depending on the type of surface an appropriate post fixing grips have to be provided.

g) g) Assembly, modifications or supplementings in the edge protection should always be performed with the use of appropriate fall protection equipment by an employee.

4.4.11 **Temporary grips and anchor points**

a) If further works are carried out at the edges of ceiling – such as eg. Installation of window joinery, bricklaying – without an facade scaffolding provided – an system anchor points in each room have to be provided, which will be fixed to the structural element,
b) A similar requirement applies to places located near lift shafts and HVAC installation shafts,
c) The contractor for the scope of work is responsible for ensuring the above-mentioned anchor points.

4.4.12 **Distribution of electrical power**

A distribution plan for electrical power shall be made before start of construction works. Only certified electricians may set up the distribution network and make changes. Cables and cords may not lay on ground or floors, but must be hung up to avoid damage. Where an electrical cable crosses an area with traffic of trucks/machinery and/or persons, the cable shall be protected by pipe, hose or similar. Damaged electrical cables and equipment shall immediately be replaced.

4.4.13 **Storage of material**

a) Materials shall be stored in safe and stable conditions.

b) Flammable substances shall be stored in locked steel storage containers or in tanks. Secondary containment or a means of spill control, drainage control and diking shall be required for containers and tanks. Tanks and containers shall be marked with the name of the product and “FLAMMABLE — KEEP FIRE AND FLAME AWAY.”
c) Pallets with materials (brick blocks, etc.) must be stored in a maximum of 2 layers - due to the stability of the stack and the ssafeness during the attaching or reattaching of loads during the transport.

4.4.14 **Works with heavy machinery**

a) Operators of heavy machinery shall have special training.

b) Heavy machinery shall be regularly inspected by certified inspectors according to legislation. Inspection reports shall be available on site.
c) For concrete pump and truck mounted crane pre-start checklist are introduced to control risk of performed operations.
d) All mobile equipment and plant must be supervised 100% of time by a signaller and it is mandatory that the equipment must have in place active flashing beacons 100% of the working time. The equipment should have reverse alarm, full mirror system in order to see 360 degrees and always drive with the lights on, even if it is daylight.

4.4.15 **Demolition works**

a) An inventory, a risk assessment and a method statement shall be made before starting demolition work.
b) Before the start of any demolition project, careful planning must be made to ensure the safety of workers on the job and of other individuals close to the demolition site
c) A competent person experienced in all phases of the demolition should conduct the demolition planning
d) Demolition works may only be performed by persons with special training and/or by specialized trade contractor.
e) Hazardous substances (e.g. asbestos, PCB etc.) may only be dismantled, transported away and disposed of by certified companies.
f) If blasting is required, a complete written blasting survey must be made by a qualified professional.
g) Measures to minimize dust, noise and vibrations to the neighbours and the public must be carefully planned.

4.4.16 **Unloading platforms**

System unloading platforms should be used. They should have static calculations and protections against horizontal force which can cause accidental impact from lifted load to the platform side.

4.4.17 **Hot works**

a) Hot work includes any work involving operations capable of initiating fires or explosions, including cutting, welding, brazing, soldering, grinding, thermal spraying, thawing pipe, torch applied roofing, or any other similar activity.
b) Hot works on site will be handled by a Permit to Work system.

4.4.18 **First Aid**

a) Trade Contractors are required to provide one competent and certificated first aider in line with first aid regulations,
b) Trade Contractors are to provide the appropriate first aid equipment for the work activity when necessary,
c) Persons appointed to provide first aid on behalf of ECHO, contractors and subcontractors will have a marking (e.g. stickers) on the protective helmet, allowing them to be quickly identified, i.e. the first aid sign - a white cross on a green square.

4.4.19 **Ladders**

The following minimum standards apply to the use of ladders:
a) The foot of the ladder will be placed on a firm and even secure surface.

b) The ladder will be placed at an approximate angle of 75˚, 1:4 from the horizontal and secured top and bottom before use. The ladder should protruded 0,75m above the landing platform.

c) Carrying of materials or equipment up ladders is prohibited; separate provision must be made to prevent carrying large amount of materials or equipment up or down a ladder (e.g. stairs, hoist etc.).

d) Aluminium ladders are **not** to be used in live switch rooms or in any locations where live electrical facilities are present.

e) Only one person may use a ladder at a time.

f) Using ladder as a working platform is possible if no other way to perform the work exist. This is because of shortage of space not for economic reasons. Alternative protections in such cases must be considered,

g) Folding ladders, steps and low landings, regardless of height, they are to be fitted with handrails to enable them to be gripped and safely ascend and descend. Always maintain the principle of the worker-ladder's three-point contact when working, ascending and descending.

4.4.20 **Construction site cargo cranes and passenger lifts**

Construction site cargo cranes and passenger lifts must have a permit for operation issued by the Office of Technical Inspection. Sliding unloading / loading barriers (gates) installed on individual floors must meet the requirements of applicable health and safety regulations in terms of security, in particular complete barrier (upper barrier, intermediate barrier and lower element protecting against falling objects).

4.4.21 **Lift shaft protection**

During the construction phase, all lift shafts will be protected in accordance with the below. requirements.
System securing are preffered in the form of system mounting brackets and system metal mesh panels. In case of a justified impossibility to ensure them, the following solution can be used:

a) upon striking of the formwork or completion of the shaft walls at each floor level an appropriate edge protection against falling will be ensured:

- (barriers: upper at the height of 110 cm, middle barrier, and toe board). The gap between the barriers and the toe board cannot exceed 45 cm.
- • The barriers should be mounted within the of the holes (inside dimension), e.g. using carpentry holders,

• Barriers must be installed in a way that prevents their accidental removal,

b) If work inside the lift shaft are planned (concrete cosmetic work, surveying work, etc.), platforms should be provided, which will be fixed/laid on the system grips fixed on the wall,

c) It is forbidden to place the working platform on protruding reinforcing bars.

d) The contractor of the specific works is responsible to ensure of the above-mentioned protections,

e) a contractor for a given scope of work is responsible for the system of protection against falls from a height, proper assembly and use.

During installation of the lift and lift equipment

a) a barriers in a higher standard (metal mesh panels), upper at the height of 110 cm, middle barrier, and toe board). The gap between the barriers and the toe board cannot exceed 45 cm. This protection measures have to be provided until the permanent doors are installed and secured;

b) all components must be installed from fully boarded working platforms before the installation of the lift car.

c) When protecting interior of the lift cabin,its elements during the construction period, UDT guidelines should be applied, including:

- The materials used for the elevator cabin casing should be non-flammable and this fact should be confirmed by an appropriate document;
- All works related to the construction of the elevator cabin should be carried out in consultation with a competent person in the knowledge of lifts (representative of the installer / crane manufacturer, crane conservator).

4.4.22 **Riser shaft protection**

To prevent falls of persons and materials, riser shafts to be provided:

a) A system edge protection (in a higher standard: mesh metal panels) including proper fixing of posts brackets to the ceiling (anchored to the floor or clamps on the ceiling thickness) be provided with edge protection;

b) upon striking of formwork or completion of riser walls an appropriate edge protection will be provided at each floor level: upper barrier at 110cm, middle barrier, toe board. The gap between the barriers and the toe board cannot exceed 45 cm.

c) one specific trade contractor will be held responsible for the fall protection,When providing of system edge protection is impossible (eg. to small size) – it is necessary to provide relevant the following safety measures:

- Providing a reinforced concrete / masonry wall around the shaft / opening - in the case of reinforced concrete technologies, the implementation should be staged in such a way that openings of an area larger than 2 m2 are secured with the target wall,
- Smaller technological openings should be secured by covering with timber platforms, not less than 22m thick, attached to the floor in a way that prevents their movement.

4.4.23 **Staircase Protection**

All staircases will be provided and protected in accordance with the following:

a) where practical the permanent handrails will be installed to provide protection during the construction phase or otherwise temporary guard rails will be provided in such a manner which allows the permanent guard rails to be fixed prior to removal of the temporary protection. It is recommended to provide temporary solutions – handrails fixed at the anchor points dedicated for permanent handrails,

b) be provided with temporary and emergency lighting in accordance withHS standards, and provide a uniform lighting level throughout to prevent shadows / dark areas;

c) be kept clean and clear of materials or equipment that obstructs the stairway, storing or blocking with materials have to be avoided,

d) above mentioned requirements have to be ensured by reinforced concrete works contractor

4.4.24 **Works on roofs and flat roofs**

a) As far as possible at the design stage, a roof wall / attic should be provided at a height of not less than 1.10 m (from the top insulation layer of the roof sheathing),
b) In the case of other design solutions, a temporary system barrier around the edge of the roof should be provided, with a height of not less than 1.10 m,
c) Optional - it is recommended to use the protruded scaffolding - facade scaffolding protruding over the edge of the roof, in such a way as to simultaneously protect the edge of the roof in accordance with the requirements (described in point a.),
d) The reinforce concrete works contractor is responsible for ensuring the above mentioned requirements,
e) In places where it is not technically possible to provide relevant system edge protections - properly plan and ensuring the assembly of anchor points (anchored to structural elements of the building) - enabling the use of correct methods of personal protection against falls from a height. The contractors for the given scope of works are responsible for providing anchorage points on the roofs.

4.4.25 **Securing of works at balconies**

a) First of all, a prefabricated, monolithic balconies with a system temporary barrier (e.g. TLC supplier's EPS security catalog - or other equivalent) have to be provided,
b) In prefabricated balconies at the design stage should be foreseen, installation of temporary edge protection to the anchor points intended for the permanent barriers installation,
c) When using monolithic balconies, it is necessary to take into account the need to install system-temporary edge protections, after disassembly of the formwork elements, the solution should be applied as for prefabricated balconies.

4.4.26 **Other equipment used during Working at Height**

a) Podium Steps

   As a rule, podium steps are to be used in short duration works at height. Podium steps must have 4 side protection, used all the time during the work

b) Step Ladders

   The following applies to the use of stepladders:
   - will only be used where it is not possible to provide a working platform, e.g. mobile scaffold towers, mobile elevating platforms or podium steps (impossible means because of lack of space as example); Not for commercial reasons
   - when used, stepladders with chest (waist) support and platform at the top must be used, handrails are preferable.

c) hop-up platform

   - hop-up are allowed to use during fit-out stage
   - use of hop-up must be clearly described in Method Statement with Risk assessment for particular task.
   - as a rule hop-up should have following dimensions: height of max 0,5m, dimensions of platform 0,25m2 (preferably 0,5m by 0,5m).

The practise of "**walking ladders**" is strictly forbidden.

4.4.27 **Site plant and equipment**

The following applies to the use of site plant and equipment:

a) operators of site plant must hold a valid licence for the duties they are undertaking;

b) operators must have the necessary experience, knowledge and training in all ancillary equipment used with the machines; i.e. quick hitches, lifting equipment etc;

c) all plant must be inspected daily or at shift changes by the operator;

d) a formal, recorded weekly inspection must take place;

e) trade contractors are to supply environmental spill kits and drip trays for all plant

f) All mobile equipment and plant must be supervised 100% of time by a signaller and it is mandatory that the equipment must have in place active flashing beacons 100% of the working time. The equipment should have reverse alarm, full mirror system in order to see 360 degrees and always drive with the lights on, even if it is daylight.

g) The use of unguarded rotating cutting tools is strictly forbidden i.e. chain saws or any electrical or power driven cutting implements. In line with EU requirements. The only exception to this rule is when cutting trees."

h) Cutting and processing of stone, slabs and paving elements, masonry materials with the use of machines and devices will be performed using the wet method, i.e. water sprinkling on the cutting disc and the material being processed - unless the manufacturer of the machine or device states otherwise,

i) Cutting saws equipped with a cutting disc must meet the minimum and essential requirements for the safety of machines, in particular they must be equipped with:

   a. Emergency switch, the design of which enables its immediate use in emergency situations,

   b. Cutting disc brake – unless the manufacturer of the machine or device states otherwise,

   c. In the case of saws for cutting masonry materials - they must have a set of side guards and a water sprinkling system for the processed material.

j) Workstations where work is carried out with the use of table saws, bending machines, etc. should be equipped with roofing systems (shelters).

4.4.28 **Temporary Lighting**

The following applies to temporary lighting:

a) the level of lighting to be provided in any work area will be determined by task to be undertaken but shall not be less than 20 lux in the work area;

b) all cables must be fixed or suspended from walls, ceilings or other structures and prevented from trailing on the floor or alternatively placed under ground protection.

4.4.29 **Temporary Works**

"Temporary Works" means all temporary works of every kind required on site for the construction of the Permanent Works and the remedying of any defects.
Temporary works include but is not limited to:

- Falsework systems to support slabs and wall construction

- Formwork systems for in-situ concrete construction
- Support systems for deep excavation
- Working platforms for heavy mobile equipment including cranes and piling rigs

The failure of temporary work structures is often because adequate engineering controls were not put in place and can lead to severe injuries and even multiple fatalities.
As a minimum standard all temporary works identified requiring engineering design should include the following stages:

a) Design Brief from worksite to designers identifying the concept of the Temporary Works (TW) and needs of the worksite.

b) Design of the TW by a competent engineer including working drawings and specifications.

c) An independent check of the design by a second competent designer.

d) The need for TW schedules during tender and construction stages.

e) Installation by competent workforce to comply with the design requirements.

f) Check by competent engineer that the installation complies with design.

g) Permit system for the loading and dismantling of the TW.

h) Monitoring the condition of the TW when in use under load.

i) There should be reference to the engineering competence requirements of those carrying out design, checking and installation activities.

4.4.30 **Power tools**

Power tools, devices and machines with electric drive (including power extension cords) on construction sites are used in high frequency mode. Each contractor should ensure thet such equipment will be inspected on a quarterly basis, i.e. at least once every three months. Instruments for measuring power tools should be periodically calibrated in accordance with the manufacturer's instructions in an accredited laboratory.
Guidelines for carrying out inspections:

a) the inspections will be carried out by authorized persons – electricians with valid SEP (Association of Polish Electrical Engineers) qualification certificate in E (operation) category,
b) inspections have to include: checking the mechanical and electrical parts, circuit continuity, short-circuit protection, measuring the insulation of electrical circuits,
c) A written protocol have to be obtained each time and will include:
   - Device type / model with serial no.,
   - Date of inspection,
   - Annotation regards the efficiency or disability of the device,
   - Signature of authorized electrician who carry out the inspection.
d) Equipment which passed the quarterly inspection will be marked with colour-code label/sticker – according with the marking system incorporated in ECHO:
   - 1st Quarter (January-March) – white colour,
   - 2nd Quarter (April-June) – green colour,
   - 3rd Quarter (July-September) – red colour,
   - 4th Quarter (October-December) – yellow.

e) Battery Supply Power Tools are not subject to quarterly inspections.

4.4.31 **Work environment measurements**

Due to the legal requirements, the Contractors should carry out measurements of the working environment, i.e. the parameters of concentration or intensity of harmful physical, chemical and biological factors, if they occur at the Contractors' workstations or if such an supposition occurs (noise, dust, microclimate, vibrations and others) . Tests and measurements should be performed by accredited laboratories (PCA accreditation - Polish Center for Accreditation). Employees should be informed about the measurement results. The measurement results should be made available for inspection by the Echo / General Cont

5 APPENDIXES LIST

1. Tradecontractor EHS questionnaire
2. Health & Safety accident report
3. Peer Review
4. Confined Space Entry permit
5. Excavations permit
6. Hot Works permit
7. Lifting Permit – Tower Cranes
8. Lifting Permit – Mobile Cranes
9. Pre-Start Meeting Agenda
10. COSHH assessment
11. IAN Report Template
12. Concrete Pumping Checklist
13. Contractor's list of employees and equipment
14. Emergency preparedness plan
15. Project Risks and Opportunity Register
16. Awards for safe behaviours – outlines
17. Pre-Acceptance Days Health and Safety Rules for Visitors
18. Pre-Acceptance Days Health and Safety Rules for Attendants
19. Guidelines – EHS drawings content tender-execution design
20. Rules of imposing financial fines on ECHO construction sites
21. Yellow-red card register
22. Complaint report
23. Construction site facilities - Guidelines