

Eastlands Primary Substation (100138) Proposed T13 Transformer and Switch House

Designer's Risk Assessment

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NAME AND ADDRESS OF PREMISES:	Eastlands Strategic Reinforcement Eastlands Primary Substation (100138) off Rowsley Street, Eastlands, Manchester, M11 3FF	WORK AREA:	Land adjacent to existing Eastlands Primary Substation		
ASSESSED BY: A.S.R.	REVIEWED BY: J.A.B.	REFERENCE:	100138-DRA-001	DATE:	February 2023

NO.	HAZARD IDENTIFIED	PERSONS OR PROPERTY AT RISK	RISK LEVEL			RECOMMENDED CONTROL MEASURES	RISK LEVEL		
			L	S	R		L	S	R
1.	Site entrance off public highway and through shared third party land:- - Risk of injury from construction vehicles manoeuvring and other site activities - Risk of unauthorised access into construction site	All site personnel and third parties	3	5	15	Project requirement Temporary fencing and signage are to be installed by the Civil Contractor to clearly define the presence and extent of the construction site The Civil Contractor is also to supervise all vehicle movements with a banksman, maintain site security, implement an appropriate system of traffic management and manage on-site parking. The proposed substation site boundary is to be constructed at the outset of the project to permanently define & secure the construction site away from third party areas	1	5	5
2.	Lack of site welfare facilities	All personnel on site	5	1	5	Project requirement The Civil Contractor is required to provide full welfare facilities for the duration of the project	1	1	1

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			L	S	R		L	S	R
3.	Electrified fencing around existing substation compound Risk of electric shock from electrified fencing	All personnel on site	2	3	6	The existing electrified fence is to be turned off only, and at all times, when the site is occupied	1	2	2
4.	Contractors compound and working areas located adjacent to live high voltage substation apparatus and underground cables Risk to health (including potential death) from contact with live substation apparatus and underground cables	All operatives on site	1	5	5	Project requirement The potential risk associated with this hazard is HIGH , but this is not reflected in the adjacent risk levels because Electricity North West require that all site operatives are fully trained in electrical safety before being allowed to enter any of their substation sites	1	5	5
5.	Deep excavations needed down to proposed site formation level - Risk of ground slippage/collapse around excavation perimeter - Risk of injury from falling / vehicles falling into excavation	All site personnel, third parties and vehicles	2	5	10	Project requirement The civil contractor is required to clearly barrier off all excavations and batter back, or otherwise protect, the excavation perimeters against potential collapse Concrete retaining walls are to be constructed immediately following the excavation works to enable external ground levels to be returned back to normal as soon as possible Fencing is to be immediately installed on the new retaining walls to prevent any risk from falling Bollards are to be installed external to the new retaining walls/fences to prevent any risk of accidental contact from vehicles manoeuvring	1	2	2

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			L	S	R		L	S	R
6.	Unstable ground conditions identified by site investigation • Risk of ground subsidence and/or differential settlement	All proposed structures on site	5	5	25	All new structures are to sit on piled foundations designed to suit the ground conditions	1	5	5
7.	Unidentified underground services within construction site • Risk of injury from contact with unidentified services • Risk of damaging unidentified services	All personnel on site All existing services on site	2	5	10	All known service providers have been contacted to identify any of their existing services in the vicinity of the proposed development. Details are available upon request The civil contractor is to remain vigilant to the presence of unexpected services encountered during the works, and is to stop work immediately until any such services have been fully assessed and any associated risks mitigated	1	5	5
8.	Site contamination • Risk to health from contact with contaminated materials on site	All construction personnel The environment	2	5	10	Site investigations have been carried out, and any risks identified in Geotechnical report ref '100138-GEO' as issued to the Civil Contractor The civil contractor is to follow and act on all advice given in the Geotechnical report	1	5	6
9.	Existing cess pit/holding tank in vicinity of proposed Switch House needing to be relocated • Risk to health from potential contact with raw, untreated sewage and poisonous gases • Risk to the environment from spillage of tank contents • Risk from deep hole in ground after tank removed	All construction personnel The environment	3	5	15	Project requirement The civil contractor is to arrange for the cess pit is to be professionally emptied and decontaminated by a specialist contractor prior to its removal The hole in the ground, resulting from removal of the tank, is to be immediately backfilled to alleviate any risk from falling	1	5	5

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			L	S	R		L	S	R
10	Deep excavations for Switch House and Transformer bund foundations - Risk of ground slippage/collapse around excavation perimeter - Risk of injury from falling / vehicles falling into excavation	All site personnel, third parties and vehicles	2	5	10	Project requirement The civil contractor is required to clearly barrier off all excavations and batter back, or otherwise protect, the excavation perimeters against potential collapse	1	2	2
11	Working at height: - Risk of injury from falling - Risk of injury from materials falling	Contractor's personnel.	4	5	20	Project requirement All structures are designed to be as low as possible The Civil Contractor's is to manage this risk in accordance with the Working at Heights regulations 2005	2	5	10

Note:

The word Authorisation throughout this Risk Assessment, refers to Electricity North West in house authorisation requirement for working on an operational substation site. All works must be supervised by a suitably authorised Electricity North West Ltd appointed person.

The word operational refers to live working areas of the substation site, which will remain live and operational throughout the scheme. Operational Staff refers to E.N.W.L. authorised maintenance engineers.

Notes:

This Designers Risk Assessment addresses hazards identified during the design stages of the project. It is intended for use by designers who should where reasonably practicable design out of the project potential hazards. Those, which remain, should be identified and highlighted within the contract documentation or directly to the principal contractor to increase awareness.

It is the responsibility of the Principal Contractor to ensure the management of identified design hazards and where appropriate, additional construction phase risk assessments are prepared for hazards which may arise during the construction process and that associated method statements, safe systems of work as necessary are produced prior to any works commencing.

The risk level should be assessed using the table shown below and following the minimum recommendations of the actions for the level of risk identified.

The assessment form should be used to record risk, recommendations and control measures.

For further guidance on the Electricity North West procedures for Risk Assessment refer to H&S procedure No. 206 Issue 1.

Definitions:

Severity	1. Very Minor	2. Minor	3. Major	4. Severe	5. Fatal	Assessment in accordance with BS8800 : 2004 Risk is the product of Likelihood x Severity
Likelihood						
1. Improbable	1 – Low	2 – Low	3 – Low	4 – Low	5 – Low	
2. Remote	2 – Low	4 – Low	6 – Medium	8 – Medium	10 – Medium	
3. Possible	3 – Low	6 – Medium	9 – Medium	12 – Medium	15 – High	
4. Probable	4 – Low	8 – Medium	12 – Medium	16 – High	20 – High	
5. Very Likely	5 – Low	10 – Medium	15 – High	20 – High	25 – High	

RISK LEVEL	ACTION AND TIMESCALE
LOW (1 – 5)	No additional control measures are required. Consideration may be given to additional solutions or improvements that imposes a more cost-effective solution. Monitoring may be required to ensure control measures are maintained.
MODERATE (6 – 12)	Where possible the risk should be reduced by design amendments or by the recommendation of control measures.. Risk remaining should be clearly identified on drawings and processed through for inclusion in the contract documentation or directly to the principal contractor. If considered necessary, Method statements and monitoring appropriate to the nature of the task should be requested prior to commencement of the task.
HIGH (15 – 25)	Detail assessment of the risk to be completed and where possible designed out of the project or reduced by design or the recommendation of control measures. Risk remaining should be clearly identified on drawings and processed through for inclusion in the contract documentation or directly to the principal contractor. The risk, all associated work, discussions, and resolutions etc to be formally recorded. Detailed method statements should be requested to provide a sequence for carrying out the identified task. Monitoring is required to ensure controls are maintained.