

Template for Electrical Contractors Audit Checklist

Disclaimer : The template for audit checklist was prepared in consultation with the Hong Kong Federation of Electrical & Mechanical Contractors Limited (HKFEMCL) and Occupational Safety & Health Council (OSHC) for typical installations and is for reference only. Housing Department, HKFEMCL and OSHC would not be liable to any indemnity or consequence whatsoever arising from the use of such template.

NSC Checklist: Electrical Installation 電力工程

Part 部分	Activity 工序	No. of Questions 題目數量	Score 分數
1	Working At Height 高空工作	6	18
2	Protection Against Falling Objects 防止物料從高處墜下	3	9
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6	Abrasive Wheels 砂輪	5	15
7	Portable Tools 手提工具	4	12
8	Electrical Works 電力工作	4	12
9	Compressed Air Tools 壓縮空氣工具	3	9
10	Dangerous Substances 危險物質	4	12
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12	Noise 噪音	4	12
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14	Miscellaneous 其他	4	12

Total 總計	58	174
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Part 1 Working At Height 高空工作

Question 1.1 Weighting : 3

Answer : _____

Has every worker been provided with a safe place of work such as provision of proper working platforms with a safe means of access (and egress) for all activities?

有否為工人提供安全的工作地方如合適的工作台及安全上落通道進行工作？

Coverage:

Staircase, ladder, access tower, working platform (including bamboo / metal scaffolding, power-operated elevating work platform, light-duty working platform, etc.)

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Code of Practice for Bamboo Scaffolding Safety, Labour Department
- Code of Practice for Metal Scaffolding Safety, Labour Department
- Overview of Working at Height, Labour Department
- Guidelines on the Design and Construction of Bamboo Scaffolds, Buildings Department
- Guidelines on Planking Arrangement for Providing Working Platforms on Bamboo Scaffolds, Construction Industry Council
- Guidance Notes on Safe Use of Power-operated Elevating Work Platforms, Labour Department
- Guidelines on Work-Above-Ground Safely, Construction Industry Council
- Safety Guide on Use of Light-duty Working Platform and Mobile Working Platform, Occupational Safety and Health Council

Audit Criteria:

1. The condition (non-slippery, sloping, double handrails), stability in respect of construction and the landing area of the access and egress should be considered.
2. The condition, stability in respect of construction of working platform including bamboo scaffold, metal scaffold, power-operated elevating work platform, etc. should be considered.
3. Proper working platform should be used for working at height.
4. Locking device shall be provided to movable working platforms to ensure that the platforms are stable when in use.
5. For working involving a possible fall of less than 2 metres but more than 900mm, light-duty working platform such as hop-up platform and step platform should be provided with guard-rails and toe-boards.
6. Ladders, hop-up platform and step platform used should possess international/ national standards such as British Standard EN 131.
7. Unless in very exceptional circumstances that working platforms or light-duty working platforms are impracticable to be used for work-above-ground below 2m, use of ladders for work-above-ground should be prohibited. Under such exceptional circumstances where ladders

have to be used, task-specific risk assessment should be conducted and safe system of work, such as a permit-to-work system, should be formulated and implemented beforehand.

8. If NSC was found using or having intention to use unsafe scaffolds/ working platforms/ ladders provided by the main contractor, the answer should be “No”. If NSC had checked the unsafe condition of the scaffold/ working platform/ ladder provided by main contractor and demonstrated no intention to use such non-conforming equipment, the answer could be “N/A”.

Question 1.2 **Weighting :** 3 **Answer :**_____

Are inspections of scaffolds/ working platforms carried out by competent person at regular intervals and results were properly recorded?

所有棚架及工作台是否定期由合資格人員檢查並妥善記錄檢查結果？

Coverage:

All working platforms (including bamboo / metal scaffolding, power-operated elevating work platform, light-duty working platform, etc.) demarcated to NSC.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Code of Practice for Bamboo Scaffolding Safety, Labour Department
- Code of Practice for Metal Scaffolding Safety, Labour Department
- Overview of Working at Height, Labour Department
- Guidance Notes on Safe Use of Power-operated Elevating Work Platforms, Labour Department
- Guidelines on Work-Above-Ground Safely, Construction Industry Council
- Safety Guide on Use of Light-duty Working Platform and Mobile Working Platform, Occupational Safety and Health Council

Audit Criteria

1. Working platform including bamboo scaffold, metal scaffold, power-operated elevating work platform, light-duty working platform, etc. should be considered.
2. Display of properly filled in prescribed form of bamboo / metal scaffolding if applicable. Auditor should check the comment on result of inspection, inspection date, name, signature and designation of competent person.
3. Inspection of power-operated elevating work platform should also be assessed in this question. The power-operated elevating work platform should be thoroughly examined and tested by a competent examiner before use or after undergoing substantial repair. It should be further examined thoroughly by a competent examiner on a regular basis as recommended by the manufacturer but not less than once per year. An authorised competent mechanic or operator should conduct the weekly inspection.
4. Before use, inspection of the light-duty working platform should be conducted according to the

所有工作台是否均裝有適當護欄及底護板？

Coverage:

All working platforms (including bamboo / metal scaffolding, power-operated elevating work platform, light-duty working platform, etc.) demarcated to NSC.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Code of Practice for Bamboo Scaffolding Safety, Labour Department
- Code of Practice for Metal Scaffolding Safety, Labour Department
- Overview of Working at Height, Labour Department
- Guidance Notes on Safe Use of Power-operated Elevating Work Platforms, Labour Department
- Guidelines on Work-Above-Ground Safety, Construction Industry Council
- Safety Guide on Use of Light-duty Working Platform and Mobile Working Platform, Occupational Safety and Health Council

Audit Criteria

1. Take adequate steps to prevent any person on construction site or any place where any construction work is carried out with a risk of fall a height of 2 metres or more. The height of a top guard-rail above any place of work on working platforms shall be not less than 900 mm and not more than 1150 mm and the height of an intermediate guard-rail shall be not less than 450 mm and not more than 600 mm. The height of a toe-board or other similar barrier shall be not less than 200 mm and securely fixed.
2. For working involving a possible fall of less than 2 metres but more than 900mm, light-duty working platform such as hop-up platform and step platform should be provided with guard-rails and toe-boards.
3. Temporarily removed or unerected guard-rails, toe-boards and barriers shall be replaced or erected as soon as practicable after the expiration of the time when removal of them are necessary for the access of persons or the movement of materials or other purposes of the work concerned.
4. If NSC was found using or having intention to use unsafe working platforms provided by the main contractor, the answer should be “No”. If NSC had checked the unsafe condition of the working platform provided by main contractor and demonstrated no intention to use such un-conforming equipment, the answer could be “N/A” .

Question 1.5 Weighting : 3

Answer : _____

Has every worker been provided with a suitable fall-arresting system if provision of proper working platform is not practicable?

當使用工作台並不切實可行，有否為工人提供合適的防墮系統？

Coverage:

All working at height activities.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Guidance Notes on Classification and Use of Safety Belt and their Anchorage Systems, Labour Department

Audit Criteria

1. Where the provision of guard-rails or coverings to prevent fall from openings is impracticable, provide fall arrest system comprising appropriate safety harness, independent lifelines and adequate, stable and sufficient anchor points so as to facilitate continuous anchorage of safety harness.
2. The anchorage point of fall-arresting system should be certified by a professional engineer. Referring to the “Guidance Notes on Classification and Use of Safety Belts and their Anchorage Systems” issued by Labour Department, eyebolt/fixed anchorage should be assessed by “Professional Engineer of the Structural Discipline” if the independent lifeline is connected.
3. If eyebolt/ fixed anchorage for fall protection purpose is certified by professional engineer other than “Structural Discipline” (for example, if statutory form – Form 6 and Form 7 certified by professional engineer but not in “Structural Discipline” being observed on-site) which will be considered as non-compliance.
4. The lanyard of the safety harness should not be anchored to the railings or any member of a temporary scaffolding or bamboo scaffolding, or to any section of water, gas and drainage pipes as these structures or device are not designed to withstand sudden shock load or impact force.

Question 1.6 Weighting : 3

Answer : _____

Are workers working at height provided with appropriate personal protective equipment and are they used properly?

進行高處工作時，有否為所有工人提供合適之個人防護裝備及工人有否正確使用該裝備？

Coverage:

All working at height activities.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Guidance Notes on Classification and Use of Safety Belt and their Anchorage Systems, Labour Department
- Guidance Notes on the Selection, Use and Maintenance of Safety Helmets, Labour Department

Question 2.2 **Weighting :** 3

Answer : _____

Are there appropriate measures taken to prevent materials, hand tools etc. from falling from height?

有否採取合適措施防止物料、手工具等從高處墜下？

Coverage:

All working at height activities and all storage/stacking areas demarcated to NSC.

Reference: (not exhaustive)

Construction Sites (Safety) Regulations

Audit Criteria:

1. Tool belts, straps or bags should be considered.
2. Auditor should comment on the application of protective measures for working at height activities.
3. The stacking/storage area must be well organised with appropriate stacking/storage systems to ensure the materials are securely stacked in a place.
4. Secure loose or light material stored on roofs and open floors to avoid them from blowing away in the wind.

Question 2.3 **Weighting :** 3

Answer : _____

Are suitable safety helmets properly worn by all workers?

是否所有工人正確配戴合適的安全帽？

Coverage:

All NSC workers.

Reference: (not exhaustive)

Guidance Notes on the Selection, Use and Maintenance of Safety Helmets, Labour Department

Audit Criteria:

1. Auditor should verify whether all workers properly wearing suitable safety helmets. The answer should be “No”, if the Y-type chin strap cannot fix the safety helmet onto worker’s head securely.
2. The standard of safety helmet and expiry date of safety helmet should be checked.
3. The in-use life statement from a manufactory can be taken as reference.
4. A helmet should be regularly inspected for damage and wear and tear. Excessive wear and tear can considerably reduce a helmet’s lifespan and any helmet that has deep scratches, has been cut or has any impact damage should be discarded and replaced.

5. Auditee should provide all workers with safety helmet with ventilation vents and Y-type chin straps and ensure all personnel wear the helmet properly.
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Part 3 Housekeeping 工作場所整理

Question 3.1 **Weighting :** 3 **Answer :** _____

Are there appropriate measures taken to ensure no timber or other material with projecting nails or other sharp objects are used or left on the site?

有否採取合適措施確保沒有有釘的木料或其他尖銳物件放置於工作場地？

Coverage:

All areas demarcated to the NSC.

Reference: (not exhaustive)

Construction Sites (Safety) Regulations

Audit Criteria:

1. Projecting nails or other sharp objects must be adequately protected or removed.
-

Question 3.2 **Weighting :** 3 **Answer :** _____

Are materials and equipment stored and stacked safely; waste properly disposed?

物料及設備是否儲存及堆疊妥當；及是否適當處理廢料？

Coverage:

All areas demarcated to the NSC.

Reference: (not exhaustive)

Construction Sites (Safety) Regulations

Audit Criteria:

1. Workplaces should be kept as clear as possible of unnecessary materials and waste. Workplaces should be kept clear of obstructions.
 2. Materials kept or stored on a construction site shall not be insecurely stacked in a place where they may be dangerous to workmen at the site.
-

Question 3.3 **Weighting :** 3 **Answer :** _____

Are suitable and adequate lighting provided to all places where lighting is necessary to secure workers' safety?

有否在有需要時為所有工作地點提供充足的照明以保障工作安全？

Coverage:

All areas demarcated to the NSC.

Reference: (not exhaustive)

Construction Sites (Safety) Regulations

Audit Criteria:

1. Measures to prevent breaking of lightings should be considered.
 2. Suitable and adequate lighting necessary to secure workmen's safety shall be provided.
-

Question 3.4 Weighting : 3

Answer : _____

Are suitable safety shoes worn by all workers?

是否所有工人穿著合適的安全鞋？

Coverage:

All NSC workers.

Audit Criteria:

1. Auditor should verify whether all workers wearing safety shoes.
-

Part 4 Lifting Operations 吊運工作

Question 4.1 Weighting : 3

Answer : _____

Are all lifting appliances and associated lifting gear inspected, tested and examined; and suitable for relevant lifting operations?

是否所有使用的起重機械及起重裝置均已檢查、測試及檢驗及適用於相關的吊運工序？

Coverage:

All lifting appliances and associated lifting gear brought in by NSC and provided by the main contractor.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations
- Guidance Notes on Inspection, thorough Examination and Testing of Lifting Appliances and

Audit Criteria:

1. The construction, condition and suitability of lifting appliances and associated lifting gear should be considered. For example, all winches should have sufficient guarding, anchorage and a proper control panel with emergency stop.
2. Inspection, test and examination records should be checked.
3. For mandatory requirement, all prescribed forms should be properly filled in name and designation, otherwise the answer should be “No”.

Question 4.2 **Weighting :** 3 **Answer :** _____

Are all responsible persons engaged in lifting operations competent?

吊運工作是否由合資格人員進行？

Coverage:

All means of lifting operations carried out by the NSC.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations

Audit Criteria:

1. The riggers shall have completed A12 Silver Card and Signaller for Hoisting Operations at Construction Sites Course OR A12S Safety Training Course for Construction Workers of Specified Trade - Rigger and Signaller provided by the CIC.
2. Auditor should check relevant certificates during on site verification.

Question 4.3 **Weighting :** 3 **Answer :** _____

Are all lifting operations being carried out safely?

是否所有的吊運工作均安全地進行？

Coverage:

All means of lifting operations carried out by the NSC.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations

Audit Criteria:

1. Condition of lifting appliances and lifting gear, method of rigging and lifting should be considered.
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Part 5 Welding/Cutting Operations and Equipment 焊接/切割工序及設備

Question 5.1 Weighting : 3 Answer : _____

Are all personnel involved in welding operations competent?

焊接工作是否由合資格人員進行？

Coverage:

All means of welding/cutting operations carried out by the NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Gas Welding and Flame Cutting) Regulation
- Code of Practice: Safety and Health at Work for Gas Welding and Flame Cutting, Labour Department
- Code of Practice: Safety and Health at Work for Manual Electric Arc Welding, Labour Department

Audit Criteria:

1. The general welder shall have at least attained the level of intermediate tradesman and registered as Registered Semi-skilled Worker under the Construction Workers Registration Ordinance.
2. The general welder undertaking flame cutting and gas welding work shall have attained the training qualification of a gas welding safety training course approved by Labour Department and holds a valid training certificate.

Question 5.2 Weighting : 3 Answer : _____

Are welding/cutting equipment such as welding machines, cables, hose, gauges, flash back arresters in good condition?

焊接切割設備如電焊機、電線、氣喉、氣壓調節器、防止回火安全掣運作正常？

Coverage:

All means of welding/cutting operations and equipment.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Gas Welding and Flame Cutting) Regulation
- Code of Practice: Safety and Health at Work for Gas Welding and Flame Cutting, Labour Department

- Code of Practice: Safety and Health at Work for Manual Electric Arc Welding, Labour Department

Audit Criteria:

1. Safety devices to prevent fire and explosion, including flash back arrester, non-return valve, pressure relief device, vent and purge device should be verified.

Question 5.3 Weighting : 3 Answer : _____

Have purpose-built trollies/carriers been used for moving gas cylinders?

有否使用合適之手推車/搬運裝置去搬運氣樽？

Coverage:

All means of welding/cutting operations and equipment.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Gas Welding and Flame Cutting) Regulation
- Code of Practice: Safety and Health at Work for Gas Welding and Flame Cutting, Labour Department

Audit Criteria:

1. Other means of secure storage of gas cylinders should be considered, for example cage.
2. Moving cylinders in suitable trolleys which they are secured upright.

Question 5.4 Weighting : 3 Answer : _____

For electric arc welding, are adequate welding earths and returns ensured and properly connected to the workpiece?

當進行電弧焊接，是否有適當之接地及回路，並正確地接駁於工件上？

Coverage:

All means of welding operations and equipment.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Electricity) Regulations.
- Code of Practice: Safety and Health at Work for Manual Electric Arc Welding, Labour Department

Audit Criteria:

1. Construction and condition of electric arc welding sets should be considered, such as:
 - The workpiece should be well earthed, and all equipment should be earthed and insulated.

- Welding machines having a maximum current output exceeding 30A single phase or half the maximum demand of an installation in any one phase is directly connected to the mains on a 3-phase supply.
- Turn off the welding machine when left unattended.
- Use welding machine for enclosed type, and ensure that terminals of the welding machine are properly protected to avoid accidental contact.
- The welding machine should be equipped with a voltage reducing device to automatically reduce the output voltage at no-load condition.

Question 5.5 Weighting : 3 Answer :_____

Are welding operations adequately screened or isolated from other workers/passers-by and other non-compatible processes?

進行焊接工序時，是否有足夠的遮擋物或隔離其他不相容的工序以保護其他工人及行人？

Coverage:

All means of welding/cutting operations. Non-compatible processes including paint spraying and tiles cleaning etc.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Gas Welding and Flame Cutting) Regulation
- Code of Practice: Safety and Health at Work for Gas Welding and Flame Cutting, Labour Department
- Code of Practice: Safety and Health at Work for Manual Electric Arc Welding, Labour Department

Audit Criteria:

1. There should be a screen or barrier to separate the welding process.
2. Non-compatible processes including paint spraying and tiles cleaning etc.
3. Warning notice on welding process is in progress should be displayed.
4. The answer could be “N/A” if no activity was carried out during physical verification.

Question 5.6 Weighting : 3 Answer :_____

Is the workplace suitable for carrying out welding or flame cutting works?

工地是否適合進行焊接工序？

Coverage:

All means of welding/cutting operations.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Gas Welding and Flame Cutting) Regulation
- Code of Practice: Safety and Health at Work for Gas Welding and Flame Cutting, Labour Department
- Code of Practice: Safety and Health at Work for Manual Electric Arc Welding, Labour Department

Audit Criteria:

1. Remove any combustible/ flammable materials from the work area. No welding operation should be conducted in an environment having a flammable atmosphere or having flammable materials in the vicinity.
2. Ensure that adjacent areas, which may be affected by the heat, sparks and slag generated by the welding operation, are free from combustible/ flammable materials and fire hazards.
3. Ventilate the indoor workplace using air blowers and exhaust fans to remove poisonous fumes and gases that are given off during welding.
4. Take measures to prevent the falling of sparks generated by the welding or flame cutting operation onto the surrounding areas.

Question 5.7 Weighting : 3 Answer : _____

Are all welders provided with appropriate personal protective equipment and are they used properly?

有否為所有焊接工人提供合適之個人防護裝備及工人有否正確使用該裝備？

Coverage:

All means of welding/cutting operations.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Gas Welding and Flame Cutting) Regulation
- Code of Practice: Safety and Health at Work for Gas Welding and Flame Cutting, Labour Department
- Code of Practice: Safety and Health at Work for Manual Electric Arc Welding, Labour Department

Audit Criteria:

1. Suitable personal protective equipment should be selected appropriate to the hazards encountered, and should be properly used and maintained.
2. PPE includes eye protection, skin and body protection, etc. if local ventilation cannot be arranged, welder should be provided with respiratory protection and a supply of fresh air.
3. The answer could be “N/A” if no activity was carried out during physical verification.

Part 6 Abrasive Wheels 砂輪

Question 6.1 Weighting : 3 Answer : _____

Are suitable grinding/cutting machines used and adequately guarded?

是否使用合適打磨/切割機械並安裝有效護罩？

Coverage:

All abrasive wheels and cutting/grinding machines (fixed and portable types).

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Abrasive Wheels) Regulations
- Safety in the Use of Abrasive Wheels, Labour Department

Audit Criteria:

1. The condition of the guarding and machine should be considered.
2. Include all cutting machines and grinding machines (fixed and portable types).
3. Guards for portable machines should be so designed that in the event of a wheel bursting or breaking, the guard remains attached to the machine.
4. Angle grinder used must be provided with an auxiliary handle.
5. Angle grinder should not be used on woodworking works.

Question 6.2 Weighting : 3 Answer : _____

Are all grinding/cutting machines and abrasive wheels selected for their suitability and are they marked with their maximum permissible speed?

是否適當地選擇打磨/切割機械及砂輪並均已刻上最高轉速？

Coverage:

All abrasive wheels and cutting/grinding machines (fixed and portable types).

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Abrasive Wheels) Regulations
- Safety in the Use of Abrasive Wheels, Labour Department

Audit Criteria:

1. The selection of wheels and machines should be considered.
2. The maximum speed of the spindle should be marked on every grinding/cutting machine so that

it is easy to compare the speed marked on the wheel with the speed of the machine spindle. Where the spindle can be operated at more than one specific speed, each speed must be shown, and if the speed is infinitely variable within a specified range, the notice must show the maximum and minimum speed.

3. The maximum permissible speed in revolutions per minute (rpm) and metres per second (m/s) specified by manufacturers should be marked on every abrasive wheel larger than 55 mm in diameter, or on the blotter or identification label which is sometimes attached to it. Since it is not practicable to mark smaller wheels, the maximum permissible speed in rpm of wheels 55 mm in diameter or less should be stated in a notice posted in a position where it can easily be read.

Question 6.3 **Weighting :** 3 **Answer :** _____

Has the statutory warning notice in respect of use of abrasive wheel been posted?

有否於需使用砂輪工作的地方張貼法定警告告示?

Coverage:

All abrasive wheels and cutting/grinding machines (fixed and portable types).

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Abrasive Wheels) Regulations
- Safety in the Use of Abrasive Wheels, Labour Department

Audit Criteria:

1. Statutory warning notice shall be posted.

Question 6.4 **Weighting :** 3 **Answer :** _____

Are all abrasive wheels properly examined, handling and storage?

有否正確檢驗、處理及存放砂輪?

Coverage:

All abrasive wheels.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Abrasive Wheels) Regulations
- Safety in the Use of Abrasive Wheels, Labour Department

Audit Criteria:

source) and all hand-held power tools (powered electrically, by internal combustion engines, hydraulically or by compressed air) such as portable electric tools and cartridge-operated fixing tools.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Factories and Industrial Undertakings (Electricity) Regulations
- Factories and Industrial Undertakings (Cartridge-Operated Fixing Tools) Regulations
- Working Safely with Hand Tools, Labour Department

Audit Criteria:

1. Select the correct weight, size and tool for the job. Avoid static load at the shoulder or arm due to the continuous holding of a tool at a raised position or the gripping of a heavy tool.
2. Use the correct size spanner. Never use a hammer or extension handle on a spanner for tightening up nuts.
3. For work on or near electrical apparatus only properly insulated tools should be used.
4. Use spark resistant tools where flammable vapours may be present.

Question 7.2 Weighting : 3

Answer : _____

Are all portable tools maintained in safe working condition?

是否所有手提工具均保持在安全的操作狀態？

Coverage:

Portable tools include all hand tools (tools operated manually without electricity or other power source) and all hand-held power tools (power tools whether powered electrically, by internal combustion engines, hydraulically or by compressed air) such as portable electric tools and cartridge-operated fixing tools.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Factories and Industrial Undertakings (Electricity) Regulations
- Factories and Industrial Undertakings (Cartridge-Operated Fixing Tools) Regulations
- Working Safely with Hand Tools, Labour Department

Audit Criteria:

1. Construction and condition of hand tools and hand-held power tools should be considered.

Question 7.3 Weighting : 3

Answer : _____

Are low voltage or cordless portable tools used, where applicable?

有否使用低電壓或無線手提式工具？

Coverage:

All portable electric tools.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Electricity) Regulations

Audit Criteria:

1. NSC must use low voltage (110v power supply) portable tools / cordless portable tools.
2. Charging facilities to ensure safe use of electricity should be verified if cordless electric portable tools are used on site.

Question 7.4 **Weighting :** 3 **Answer :** _____

Are all workers using portable tools provided with appropriate personal protective equipment and are they used properly?

有否為所有工人於使用手提工具工作時提供合適之個人防護裝備及工人有否正確使用該裝備？

Coverage:

All hand tools (tools operated manually without electricity or other power source) and all hand-held power tools (power tools whether powered electrically, by internal combustion engines, hydraulically or by compressed air) such as portable electric tools and cartridge-operated fixing tools.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Electricity) Regulations
- Factories and Industrial Undertakings (Cartridge-Operated Fixing Tools) Regulations
- Construction Sites (Safety) Regulations
- Working Safely with Hand Tools, Labour Department

Audit Criteria:

1. The answer could be “N/A” if no activity was carried out during physical verification.

Part 8 Electrical Works 電力工作

Question 8.1 **Weighting :** 3 **Answer :** _____

Where relevant, are electric cables used by NSC adequately suspended/installed to avoid them from being unduly laid on floor?

由NSC使用的電線是否適當地懸掛 / 安裝，避免放置在地面上？

Coverage:

All fixed electric installation and portable electric tools.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Electricity) Regulations

Audit Criteria

1. Suspension level, condition of cables and the connector should be considered.

Question 8.2

Weighting : 3

Answer : _____

For electrical equipment and installations used by NSC in humid environment or exposed to weather, is it weatherproof type or contained in an appropriate weatherproof enclosure?

由NSC使用的電力設備及裝置在潮濕或戶外環境中使用，是否具有防水性能或裝有防水外殼？

Coverage:

All temporary and fixed electric installation and portable electric tools.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Electricity) Regulations

Audit Criteria

1. Condition of enclosure, switch boxes, cables and the connector should be considered.
2. Temporary switch boxes, socket outlets, plugs and cable couplers are of splash-proof type with a protection class of IP54 or above.

Question 8.3

Weighting : 3

Answer : _____

Are tools and equipment connected to the electrical supply system with approved type of connectors, and provided with appropriate protection against earth leakage and suitably located at means of cutting off the electricity supply when necessary?

是否所有工具及設備均接上適當的電線插座，並裝有漏電斷路裝置以便有需要時切斷電源？

Coverage:

All temporary and fixed electric installation and portable electric tools.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Electricity) Regulations

Audit Criteria

1. Construction and condition of cables and the connector should be considered.
2. All electrical connections must be proper plugs and sockets. Makeshift connections and taped joints are not permitted.
3. Using industrial three-way adaptor should be avoided to prevent overloading socket outlets.

Question 8.4 **Weighting :** 3 **Answer :** _____

Where relevant, has a permit-to-work system in operation for electrical works and have suitable types of Lock Out / Tag Out equipment been used (e.g. electrical/machinery maintenance and modification works)?

如適用，有否使用工作許可證制度於電力工程及使用適當的上鎖掛牌設備（例如電力/機械維修及改裝工程）？

Coverage:

All temporary and fixed electric installation and portable electric tools.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Electricity) Regulations

Audit Criteria

1. On-site verification is necessary.

Part 9 Compressed Air Tools 壓縮空氣推動工具

Question 9.1 **Weighting :** 3 **Answer :** _____

Are the air receivers/air compressors and all pneumatic air tools in good condition?

是否空氣容器/壓力容器及所有氣動工具均運作良好？

Coverage:

All air receivers/air compressors and all pneumatic air tools brought in by NSC.

Reference: (not exhaustive)

Boilers and Pressure Vessels Regulations

Audit Criteria

1. Construction and condition of air receivers/air compressors and pneumatic air tools; and guarding of the dangerous part should be considered.

所有危險物質有否貼上正確標籤？

Coverage:

All dangerous substances and dangerous goods brought in, stored and used by NSC.

Reference: (not exhaustive)

Factories and Industrial Undertakings (Dangerous Substances) Regulations

Audit Criteria

1. Condition of the labels should also be considered.
-

Question 10.2 **Weighting :** 3 **Answer :** _____
Are all dangerous substances such as testing gas/refrigerant/paints/adhesive agents/joint sealants in the workplace stored correctly?

有否妥善儲存所有危險物質例如測試氣/冷凍劑/油漆/黏合劑/密封劑等？

Coverage:

All dangerous substances and dangerous goods brought in, stored and used by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Dangerous Substances) Regulations
- Dangerous Goods Regulations

Audit Criteria

1. Quantity and storage condition of the dangerous substances should be considered.
 2. Every container, storeroom, cupboard and bin used for storing flammable substances shall be clearly and boldly marked 'Flammable Substance 易燃物品'.
-

Question 10.3 **Weighting :** 3 **Answer :** _____

Are there “No Smoking” signs displayed in all locations containing flammable materials?

有否於易燃物料附近張貼嚴禁吸煙告示？

Coverage:

All dangerous substances and dangerous goods brought in, stored and used by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Dangerous Substances) Regulations
- Dangerous Goods Regulations

Audit Criteria

1. Measures shall be taken to ensure that smoking or the use of naked lights is prohibited in a site where flammable liquid or any mixture containing any such liquid or any substance or thing which will involve danger from fire is used.
-

Question 10.4 **Weighting :** 3

Answer : _____

Are workers provided with appropriate personal protective equipment when using dangerous substances and are they used properly?

有否為所有須處理危險物質的工人提供合適之個人防護裝備及工人有否正確使用該裝備？

Coverage:

All dangerous substances and dangerous goods used by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Dangerous Substances) Regulations
- Dangerous Goods Regulations

Audit Criteria

1. The answer could be “N/A” if no activity was carried out during physical verification.
-

Part 11 Manual Handling and Mechanical Materials Handling

體力處理操作及物料搬運機械

Question 11.1 **Weighting :** 3

Answer : _____

Has competent person been appointed to operate mechanical handling plants (e.g. forklift operations and use of material hoist, etc.) and is it operated safely?

所有機械輔助設備（例如叉式起重車及物料吊重機等）之操作是否由合資格人員進行及是否安全地操作？

Coverage:

All mechanical materials handling plants and loadshifting machineries used by NSC.

Reference: (not exhaustive)

- Construction Sites (Safety) Regulations
- Factories and Industrial Undertakings (Loadshifting Machinery) Regulation
- Guidance Notes for Safe Use of Fork-lift Trucks, Labour Department

Audit Criteria

1. Training certificates should be checked.
 2. Include all mechanical materials handling plants and loadshifting machineries used by NSC's contractor.
 3. Auditor should verify the operation of mechanical aids.
-

Question 11.2 **Weighting :** 3 **Answer :** _____

Are there suitable aids for materials handling and transportation of materials used?

有否使用合適輔助設備協助處理及運送物料？

Coverage:

All aids for materials handling and transportation of materials used by NSC.

Reference: (not exhaustive)

- Occupational Safety and Health Regulations
- Guidance Notes for Manual Handling Operations, Labour Department

Audit Criteria

1. Auditor should verify if workers use suitable aids such as mechanical aids, trolley, etc. for materials handling and transportation of materials.
-

Question 11.3 **Weighting :** 3 **Answer :** _____

Are the manual operations carried out correctly?

有否正確進行體力處理操作？

Coverage:

All manual operations carried out by NSC.

Reference: (not exhaustive)

- Occupational Safety and Health Regulations
- Guidance Notes for Manual Handling Operations, Labour Department

Audit Criteria

1. Auditor should verify if NSC employees follow the safe work practices.
2. The answer should be “NA” if no manual handling operation was observed during on-site verification.

Part 12 Noise 噪音

Question 12.1 Weighting : 3 Answer : _____

Has noise assessment been carried out by a competent person to determine which machines, combinations of machines or work processes including ambient noise, are liable to expose workers to noise levels of 85 dBA or more?

有否由合資格人士進行噪音評估以找出哪些設備，工序或其組合會使工人曝露於85dBA或以上的噪音水平？

Coverage:

All machines, combinations of machines or work processes operated by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Noise at Work) Regulation
- Guidance Notes for Factories and Industrial Undertakings (Noise at Work) Regulation
- Guidance Notes on Appointment of Competent Person to Conduct for Noise Assessment at Workplaces, Labour Department

Audit Criteria

1. Where applicable, noise assessment report should be checked.
2. The question could be “N/A” if no noisy operations or activities are observed or found to have been done on site. If noisy machinery such as abrasive cutting machinery, circular cutting machinery, metal grinding machinery, rock breaking machinery or wood working machinery etc., is used on site, noise assessment is usually required.
3. According to “Guidance Notes on Factories and Industrial Undertakings (Noise at Work) Regulation”, as a rough guide, the first action level might be reached and an assessment of $L_{EP,d}$ will usually be needed wherever people have to shout to be heard or have difficulty being heard clearly by someone about 2 metres away, or they find it difficult to talk to each other.

Question 12.2 Weighting : 3 Answer : _____

Where noise levels may lead to the risk of deafness, is there a system implemented to reduce the emission or exposure to noise by planning work, changing machinery or appropriate steps to reduce the need for people to work in high noise levels?

當噪音達到可能造成失聰的水平，是否有執行制度藉計劃工作、轉換設備或適當步驟去減少工人曝露於高噪音的機會？

Coverage:

All machines, combinations of machines or work processes operated by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Noise at Work) Regulation
- Guidance Notes for Factories and Industrial Undertakings (Noise at Work) Regulation, Labour Department
- Guidance Notes on Appointment of Competent Person to Conduct for Noise Assessment at Workplaces, Labour Department

Audit Criteria

1. Where applicable, the arrangement to reduce the emission or exposure to noise should be made and implemented according to hierarchy of control such as by planning work, changing machinery or appropriate steps to reduce the need for people to work in high noise levels. Personal protective equipment should be used as last resort.
 2. If no noisy operations/machines are observed or the measured value of Daily Personal Noise Exposure was less than 85 dB(A) in the assessment, “N/A” should be given.
-

Question 12.3 Weighting : 3

Answer : _____

Where noise levels may lead to the risk of deafness, or where noise may create a nuisance, are approved hearing protection selected and issued to employees?

當噪音達到可能造成失聰的水平或騷擾，有否為員工選擇及提供認可的聽覺保護器？

Coverage:

All machines, combinations of machines or work processes operated by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Noise at Work) Regulation
- Guidance Notes for Factories and Industrial Undertakings (Noise at Work) Regulation, Labour Department
- Guidance Notes on Appointment of Competent Person to Conduct for Noise Assessment at Workplaces, Labour Department

Audit Criteria

1. Where applicable, approved type of hearing protection should be selected and issued for employees exposed to noisy operations/machines.
2. If no noisy operations/machines are observed or the measured value of Daily Personal Noise Exposure was less than 85 dB(A) in the assessment, “N/A” should be given.

Question 12.4 Weighting : 3

Answer : _____

Are the noisy operations/machines identified and marking out high noise level zones?

有否找出一些高噪音設備或工序，並標示為高噪音區域？

Coverage:

All machines, combinations of machines or work processes operated by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Noise at Work) Regulation
- Guidance Notes for Factories and Industrial Undertakings (Noise at Work) Regulation, Labour Department
- Guidance Notes on Appointment of Competent Person to Conduct for Noise Assessment at Workplaces, Labour Department

Audit Criteria

1. Where applicable, the noisy operations/machines are required to be demarcated as high noise level zone.
2. If no noisy operations/machines are observed or the measured value of Daily Personal Noise Exposure was less than 90 dB(A) in the assessment, “N/A” should be given.

Part 13 Work in Confined Spaces 密閉空間工作

Question 13.1 Weighting : 3

Answer : _____

Has risk assessment been conducted by a competent person before confined space work commenced (E.g. cellars and water tanks etc.)?

進行密閉空間工作之前，是否已由合資格人士進行風險評估（例如地下室、水缸等）？

Coverage:

All confined spaces works carried out by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Confined Spaces) Regulations
- Code of Practice for Safety at Work in Confined Spaces, Labour Department

Audit Criteria:

1. Check certificates of competent persons.
2. The risk assessment report should be properly filled in and with sufficient coverage and

conducted by competent person.

Question 13.2 **Weighting :** 3 **Answer :** _____

Where relevant, are workers who work in confined spaces competent?

是否所有進入密閉空間工作的工人均合資格？

Coverage:

All confined spaces works carried out by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Confined Spaces) Regulations
- Code of Practice for Safety at Work in Confined Spaces, Labour Department

Audit Criteria:

1. Check certificates of certified workers.
-

Question 13.3 **Weighting :** 3 **Answer :** _____

Where relevant, is there a permit-to-enter and a permit-to-work system in operation?

有否實施工作許可證制度？

Coverage:

All confined spaces works carried out by NSC.

Reference: (not exhaustive)

- Factories and Industrial Undertakings (Confined Spaces) Regulations
- Code of Practice for Safety at Work in Confined Spaces, Labour Department

Audit Criteria:

1. Permit-to-work should be properly signed and displayed.
 2. Verify the compliance of permit-to-work elements specified.
 3. Calibration of the gas detector should be valid and gas detector function normally.
-

Question 13.4 **Weighting:** 3 **Answer :** _____

Where relevant, is personal protective equipment and rescue equipment available?

是否已準備有關的個人防護裝備及拯救設備？

Coverage:

All personal protective equipment and rescue equipment for confined spaces.

Audit Criteria:

1. Construction and condition of guarding should be considered.
-

Question 14.3 **Weighting :** 3

Answer : _____

Are first aid facilities adequate and properly maintained?

有否提供足夠的急救設施並保持在良好狀況？

Coverage:

All first aid facilities maintained by NSC.

Reference: (not exhaustive)

- Occupational Safety and Health Regulation
- Construction Sites (Safety) Regulations

Audit Criteria:

1. Auditor should verify the first aid facilities such as first aid box on site.
-

Question 14.4 **Weighting :** 3

Answer : _____

Are adequate welfare facilities provided to workers?

有否為所有工人提供足夠福利設施？

Coverage:

All the welfare facilities used by NSC.

Reference: (not exhaustive)

- Occupational Safety and Health Regulation
- Construction Sites (Safety) Regulations

Audit Criteria:

1. Auditor should verify the adequacy of provision of drinking water, rest areas and storage facilities for personal property on site.
-