

## HSE CONSTRUCTION DIVISION PRIORITY RISKS 2004 ONWARDS

### Safety Priorities

#### Work at height

Reducing falls from height through:

- elimination by design;
- appropriate selection and use of equipment
- avoidance or safe use of ladders and step ladders
- proper erection use of scaffold towers
- preventing falls through fragile materials
- replacement of fragile roof assemblies with nonfragile
- alternatives;

#### Site transport

Reduce risk through:

- effective planning and management of vehicle movements both on and off site
- segregation of vehicles and pedestrians;
- adequate driver visibility
- vehicle maintenance and driver competency

#### Lifting operations

Reduce risk through:

- planned by trained
- competent and appointed person(s);
- lifting plan and method statement prepared as part of the project H&S Plan
- slinging arrangements planned and slinging undertaken by trained and competent persons;

#### Organisation and order

Controlling the risk of slips and trips by:

- Appropriate planning of deliveries
- organisation of materials storage and active management of housekeeping.

#### Temporary traffic management

Reduce risk through specialist contractors and highway authorities adopting improved ways of working and meeting standards set out in the 'Good Practice Guide' for temporary traffic management on high speed roads.

### Health priorities

#### Asbestos

Reduce risk by:

- early identification of the presence of asbestos in a project;
- assessment of the risk and planning to control the risk

### HSE CONSTRUCTION DIVISION PRIORITY RISKS 2004 ONWARDS (Continued)

#### **Musculoskeletal Injury**

Reduce risk through use of lighter weight construction products, in particular kerbstones, blocks and bagged products use of mechanical lifting aids.

#### **Cement dermatitis**

Reduce risk by:

- eliminating exposure where possible
- improving management and control of exposure
- good standards of welfare
- provision of simple health surveillance such as skin inspections by an appointed competent person

#### **Hand arm vibration syndrome (HAVS)**

Reduce risk by eliminating work which leads to high exposure and improving tool selection and maintenance

#### **Noise induced hearing loss (NIHL)**

Reduce risk by:

- eliminating noisy processes through substitution and through the selection of noise-reduced equipment;
- audiometry for those workers who remain at risk.

<b>Examples of potential hazards for designers to consider (<a href="http://www.hse.gov.uk/construction/designers/content/generalhazards.htm">www.hse.gov.uk/construction/designers/content/generalhazards.htm</a>)</b>			
<b>Hazardous activities</b>	<b>Examples of hazards</b>	<b>Examples of designer's intervention to aid control of the risk</b>	<b>Relevant</b>
Work at height	Fall from a flat roof	Design in parapet or barrier Design in provision to ease installation of temporary handrails	Yes
Work at height	Fall through <ul style="list-style-type: none"> <li>• fragile roof</li> <li>• fragile roof skylight assemblies</li> </ul>	Don't specify fragile materials Identify existing fragile assemblies Position ventilation and extraction equipment to avoid going on roofs	Yes
Work at height	Fall from ladder	'Design out' the need for ladders during construction, cleaning and maintenance operations, e.g. <ul style="list-style-type: none"> <li>• Design stairways for use during construction</li> <li>• Design hard standing to allow use of mobile access equipment</li> <li>• Design windows to be cleaned from the inside</li> <li>• Specify materials that don't need routine painting, or design in safe access for maintenance</li> <li>• Consider prefabrication so that sub-assemblies can be erected at ground level and then safely lifted into place</li> </ul>	Yes
Working in or close to excavations	Poor ground conditions resulting in collapse, inundation, asphyxiation, etc Contact with contaminants	Provide adequate information about ground conditions and position of services Limit depth of excavation	Yes
Working close to plant and vehicles	Struck/trapped by moving plant or vehicles	Position structures to allow: <ul style="list-style-type: none"> <li>• Safe access and egress onto public roads</li> <li>• The minimising of reversing</li> <li>• The segregation of pedestrians and vehicles</li> </ul>	Yes
Working on electrical systems	Exposure to live contacts Contact with overhead or underground cables	Identify existing service positions Position structures to minimise risks from: <ul style="list-style-type: none"> <li>• Buried services</li> <li>• Overhead cables</li> </ul>	Yes
Work on, altering, or erecting structures	Collapse of the structure due to instability	Suggest a sequence of erection Design sacrificial bracing elements to aid erection Design structure for erection loads State design philosophy and assumptions for stability Provide limitations on lifting sling angles Inform client of his duty to provide information, e.g. an structural survey	Yes
Working in unergonomic / strenuous conditions	Inappropriate and repetitive manual handling	Specify light blocks (<20kg) Design rebar cages for lifting Specify couplers in place of long laps, to aid steel fixing	Yes

<b>Examples of potential hazards for designers to consider (www.hse.gov.uk/construction/designers/content/generalhazards.htm) (Continued)</b>			
<b>Hazardous activities</b>	<b>Examples of hazards</b>	<b>Examples of designer's intervention to aid control of the risk</b>	<b>Relevant</b>
Working in unergonomic/strenuous conditions	Handling heavy loads, e.g. kerb stones	Adapt design for the use of mechanical aids Specify lighter alternatives	Yes
Working in unergonomic/strenuous conditions	Lifting in awkward posture, e.g. needing to twist and turn, particularly when repeated	Design for ease of access, e.g. avoiding need for awkward postures or twisting in plant room Consider space requirements for access, e.g. services in ceiling voids, fixing rebar, beam and block floors	Yes
Working with hand held tools	Hand arm vibration syndrome (HAVS)	Specifying surface finishes that don't require scabbling Avoid chasing Avoid hand tunneling Design piles so that mechanical pile cropping is possible	Yes
Working with hazardous materials	Exposure to irritants, corrosives, asbestos, biochemicals, radiological agents, toxins, etc., e.g. contact with wet cement	Specify low chrome cement Design to use bulk supply pumped concrete, to reduce skin contact Provide enabling works, to allow welfare facilities to be installed at the start of a project Inform client of his duty to provide information, e.g. an asbestos survey Specify adhesives which have non volatile solvents, e.g. water based adhesives	Yes
Working in noisy environments	Noise, resulting in hearing loss	Adapt the design to allow the use of less noisy solutions, e.g. hydraulic piling Consider the use of self compacting concrete Specify crack-inducers, where appropriate, to avoid saw cutting Cast in brick ties, instead of shot-firing	Yes
Working in confined spaces	Asphyxiation, noise, inundation, etc.	Examine whether the design can avoid a confined space Make provision in the design for prompt and easy rescue Make adequate provision for access Avoid on-site welding	Yes
Work on restricted sites, e.g. refurbishment	Handling of heavy and unwieldy components	Use alternative structural sections, e.g. multiple rolled steel angles for a single universal beam Specify spliced beams	Yes

Red, amber and green lists ( <a href="http://www.hse.gov.uk/construction/designers/content/lists2.htm">www.hse.gov.uk/construction/designers/content/lists2.htm</a> ) The following should be avoided if practicable	Relevant
<b>Red Lists</b>	
Pre-tender health and safety plan not to be issued until detailed structural surveys, asbestos surveys, etc. completed	Yes
Scabbling of concrete ('stop ends', etc);	???
Demolition by hand-held breakers of the top sections of concrete piles (pile cropping techniques are available);	???
The specification of fragile rooflights and roofing assemblies;	???
Processes giving rise to large quantities of dust (dry cutting, blasting etc.);	???
On-site spraying of harmful particulates;	???
The specification of structural steelwork which is not purposely designed to accommodate safety nets	No
Designing roof mounted services requiring access (for maintenance, etc), without provision for safe access (eg. Barriers).	Yes
<b>Amber Lists</b>	
Internal manholes in circulation areas	Yes
External manholes in heavy used vehicle access zones	Yes
The specification of "lip" details (i.e. trip hazards) at the tops of pre-cast concrete staircases	Yes
The specification of shallow steps (i.e. risers) in external paved areas	Yes
The specification of heavy building blocks i.e. those weighing > 20kgs	Yes
Large and heavy glass panels	Yes
The chasing out of concrete / brick / blockwork walls or floors for the installation of services	Yes
The specification of heavy lintels (the use of slim metal or concrete lintels being preferred)	Yes
The specification of solvent-based paints and thinners, or isocyanates, particularly for use in confined areas	???
Specification of curtain wall or panel systems without provision for the tying of scaffolds	No
Specification of blockwork walls >3.5 metres high and retarded mortar mixes	???

<b>Red, amber and green lists (<a href="http://www.hse.gov.uk/construction/designers/content/lists2.htm">www.hse.gov.uk/construction/designers/content/lists2.htm</a>)</b> <b>The following should be avoided if practicable</b>	<b>Relevant</b>
<a href="#">Green Lists</a>	
Adequate access for construction vehicles to minimise reversing requirements (one-way systems and turning radii)	Yes
Provision of adequate access and headroom for maintenance in plant rooms, and adequate provision for replacing heavy components	Yes
Thoughtful location of of mechanical / electrical equipment, light fittings, security devices etc. to facilitate access and away from crowded areas	Yes
The specification of concrete products with pre-cast fixings to avoid drilling	Yes
Specify half board sizes for plasterboard sheets to make handling easier	Yes
Early installation of permanent means of access, and prefabricated staircases with hand rails	Yes
The provision of edge protection at permanent works where there is a foreseeable risk of falls after handover	Yes
Practical and safe methods of window cleaning (eg. from the inside)	Yes
Appointment of a Temporary Work Coordinator (BS 5975)	No
Off-site timber treatment if PPA- and CCA-based preservatives are used (Boron or copper salts can be used for cut ends on site)	Yes