

SAFE DESIGN OF STRUCTURES - CODE OF PRACTICE

1. FALLS, SLIPS AND TRIPS

1.1 WORKING AT HEIGHTS

1.1.1 DURING CONSTRUCTION

WHEREVER POSSIBLE, COMPONENTS FOR THIS BUILDING SHOULD BE PREFABRICATED OFF SITE OR AT GROUND LEVEL TO MINIMISE THE RISK OF WORKERS FALLING MORE THAN TWO METERS. HOWEVER, CONSTRUCTION OF THIS BUILDING WILL REQUIRE WORKERS TO BE WORKING AT HEIGHTS WHERE A FALL IN EXCESS OF TWO METERS IS POSSIBLE AND INJURY IS LIKELY TO RESULT FROM SUCH A FALL. THE BUILDER SHOULD PROVIDE A SUITABLE BARRIER WHEREVER A PERSON IS REQUIRED TO WORK IN A SITUATION WHERE FALLING MORE THAN TWO METERS IS A POSSIBILITY.

1.1.2 DURING OPERATION OR MAINTENANCE

HOUSES OR OTHER LOW-RISE BUILDINGS WHERE SCAFFOLDING IS APPROPRIATE - CLEANING AND MAINTENANCE OF WINDOWS, WALLS, ROOFS OR OTHER COMPONENTS OF THIS BUILDING WILL REQUIRE PERSONS TO BE SITUATED WHERE A FALL FROM A HEIGHT IN EXCESS OF TWO METERS IS POSSIBLE. WHERE THIS TYPE OF ACTIVITY IS REQUIRED, SCAFFOLDING, LADDERS AND TRESTLES SHOULD BE USED IN ACCORDANCE WITH RELEVANT CODES OF PRACTICE, REGULATIONS OR LEGISLATION.

BUILDINGS WHERE SCAFFOLDING, LADDERS AND TRESTLES ARE NOT APPROPRIATE - CLEANING AND MAINTENANCE OF WINDOWS, WALLS, ROOFS OR OTHER COMPONENTS OF THE BUILDING WILL REQUIRE PERSONS TO BE SITUATED WHERE A FALL FROM A HEIGHT IN EXCESS OF TWO METERS IS POSSIBLE. WHERE THIS TYPE OF ACTIVITY IS REQUIRED, FALL BARRIERS OR PERSONAL PROTECTIVE EQUIPMENT (PPE) SHOULD BE USED IN ACCORDANCE WITH RELEVANT CODES OF PRACTICE REGULATIONS OR LEGISLATION.

1.1.3 ANCHORAGE POINTS

ANCHORAGE POINTS FOR PORTABLE SCAFFOLD OR FALL ARREST DEVICES HAVE BEEN INCLUDED IN THE DESIGN FOR USE BY MAINTENANCE WORKERS. ANY PERSONS ENGAGED TO WORK ON THE BUILDING AFTER COMPLETION OF CONSTRUCTION WORK SHOULD BE INFORMED ABOUT THE ANCHORAGE POINTS.

1.2 SLIPPERY OR UNEVEN SURFACES

1.2.1 FLOOR FINISHES — SPECIFIED

IF FINISHES HAVE BEEN SPECIFIED BY THE DESIGNER, THESE HAVE BEEN SELECTED TO MINIMISE THE RISK OF FLOORS AND PAVED AREAS BECOMING SLIPPERY WHEN WET OR WHEN WALKED ON WITH WET SHOES/FEET. ANY CHANGES TO THE SPECIFIED FINISH SHOULD BE MADE IN CONSULTATION WITH THE DESIGNER OR, IF THIS IS NOT PRACTICAL, SURFACES WITH AN EQUIVALENT OR BETTER SLIP RESISTANCE SHOULD BE CHOSEN.

1.2.2 FLOOR FINISHES - BY OWNER

IF THE DESIGNER HAS NOT BEEN INVOLVED IN THE SELECTION OF SURFACE FINISHES, THE OWNER IS RESPONSIBLE FOR THE SELECTION OF SURFACE FINISHES IN THE PEDESTRIAN-TRAFFICABLE AREAS OF THE BUILDING. SURFACES SHOULD BE SELECTED IN ACCORDANCE WITH AS/HB 197:1999 AND AS/NZS 4586:2004.

1.2.3 STEPS, LOOSE OBJECTS AND UNEVEN SURFACES

DUE TO THE DESIGN REQUIREMENTS FOR THE BUILDING, STEPS AND/OR RAMPS ARE INCLUDED IN THE BUILDING THAT MAY BE A HAZARD TO WORKERS CARRYING OBJECTS OR OTHERWISE OCCUPIED. STEPS SHOULD BE CLEARLY MARKED WITH BOTH VISUAL AND TACTILE WARNINGS DURING CONSTRUCTION, MAINTENANCE, DEMOLITION, AND AT ALL TIMES WHEN THE BUILDING OPERATES AS A WORKPLACE.

BUILDING OWNERS AND OCCUPIERS SHOULD MONITOR THE PEDESTRIAN ACCESS WAYS AND, IN PARTICULAR, ACCESS TO AREAS WHERE MAINTENANCE IS ROUTINELY CARRIED OUT, TO ENSURE THAT SURFACES HAVE NOT MOVED OR CRACKED SUCH THAT THEY BECOME UNEVEN AND PRESENT A TRIP HAZARD. SPILLS, LOOSE MATERIAL, STRAY OBJECTS OR ANY OTHER MATTER THAT MAY CAUSE A SLIP OR TRIP SHOULD BE CLEANED OR REMOVED FROM ACCESS WAYS.

CONTRACTORS SHOULD BE REQUIRED TO MAINTAIN A TIDY WORK SITE DURING CONSTRUCTION, MAINTENANCE OR DEMOLITION TO REDUCE RISK OF TRIPS AND FALLS AT THE WORKPLACE. MATERIALS FOR CONSTRUCTION OR MAINTENANCE SHOULD BE STORED IN DESIGNATED AREAS AWAY FROM ACCESS WAYS AND WORK AREAS.

2. FALLING OBJECTS

2.1 LOOSE MATERIALS OR SMALL OBJECTS

CONSTRUCTION, MAINTENANCE OR DEMOLITION WORK ON OR AROUND THE BUILDING IS LIKELY TO INVOLVE PERSONS WORKING ABOVE GROUND LEVEL OR ABOVE FLOOR LEVELS. WHERE THIS OCCURS, ONE OF THE FOLLOWING MEASURES SHOULD BE TAKEN TO AVOID OBJECTS FALLING, FROM THE AREA WHERE WORK IS BEING CARRIED OUT, ONTO PERSONS BELOW.

1. PREVENT OR RESTRICT ACCESS TO AREAS BELOW WHERE THE WORK IS BEING CARRIED OUT.
2. PROVIDE TOE BOARDS TO SCAFFOLDING AND WORK PLATFORMS.
3. PROVIDE A PROTECTIVE STRUCTURE BELOW THE WORK AREA.
4. ENSURE THAT ALL PERSONS BELOW THE WORK AREA HAVE PERSONAL PROTECTIVE EQUIPMENT.

2.2 BUILDING COMPONENTS

DURING CONSTRUCTION, RENOVATION OR DEMOLITION OF THE BUILDING, PARTS OF THE STRUCTURE INCLUDING FABRICATED STEELWORK, HEAVY PANELS AND MANY OTHER COMPONENTS WILL REMAIN STANDING PRIOR TO OR AFTER SUPPORTING PARTS ARE IN PLACE. CONTRACTORS SHOULD ENSURE THAT TEMPORARY BRACING OR OTHER REQUIRED SUPPORT IS IN PLACE AT ALL TIMES WHEN COLLAPSE, WHICH MAY INJURE PERSONS IN THE AREA, IS A POSSIBILITY. MECHANICAL LIFTING OF MATERIALS AND COMPONENTS DURING CONSTRUCTION, MAINTENANCE OR DEMOLITION PRESENTS A RISK OF FALLING OBJECTS. CONTRACTORS SHOULD ENSURE THAT APPROPRIATE LIFTING DEVICES ARE USED, THAT LOADS ARE PROPERLY SECURED, AND THAT ACCESS TO AREAS BELOW THE LOAD IS PREVENTED OR RESTRICTED.

3. TRAFFIC MANAGEMENT

BUILDINGS ON A MAJOR ROAD, NARROW ROAD OR STEEPLY INCLINED ROAD - PARKING OF VEHICLES OR LOADING/UNLOADING OF VEHICLES ON THE ROADWAY MAY CAUSE A TRAFFIC HAZARD. DURING CONSTRUCTION, MAINTENANCE OR DEMOLITION OF THE BUILDING, DESIGNATED PARKING FOR WORKERS AND LOADING AREAS SHOULD BE PROVIDED. TRAINED TRAFFIC MANAGEMENT PERSONNEL SHOULD BE RESPONSIBLE FOR SUPERVISION OF THESE AREAS. BUILDINGS WHERE ON-SITE LOADING/UNLOADING IS RESTRICTED - CONSTRUCTION OF THE BUILDING MAY REQUIRE LOADING AND UNLOADING MATERIALS ON THE ROADWAY. DELIVERIES SHOULD BE WELL PLANNED TO AVOID CONGESTION OF LOADING AREAS AND TRAINED TRAFFIC MANAGEMENT PERSONNEL SHOULD BE USED TO SUPERVISE LOADING/UNLOADING AREAS. ALL BUILDINGS - BUSY CONSTRUCTION AND DEMOLITION SITES PRESENT A RISK OF COLLISION WHEN DELIVERIES AND OTHER TRAFFIC ARE MOVING WITHIN THE SITE. A TRAFFIC MANAGEMENT PLAN SUPERVISED BY TRAINED TRAFFIC MANAGEMENT PERSONNEL SHOULD BE IMPLEMENTED FOR THE WORK SITE.

4. SERVICES

GENERAL: RUPTURE OF SERVICES DURING EXCAVATION FOR OTHER ACTIVITY CREATES A VARIETY OF RISKS INCLUDING RELEASE OF HAZARDOUS MATERIAL. EXISTING SERVICES MAY BE LOCATED ON OR AROUND THE BUILDING SITE. WHERE KNOWN, THESE ARE IDENTIFIED ON THE DRAWINGS, BUT THE EXACT LOCATION AND EXTENT OF SERVICES MAY VARY FROM THAT INDICATED. SERVICES SHOULD BE LOCATED USING AN APPROPRIATE SERVICE (SUCH AS DIAL BEFORE YOU DIG, TELSTRA, ETC.). APPROPRIATE EXCAVATION PRACTICE SHOULD BE USED AND, WHERE NECESSARY, SPECIALIST CONTRACTORS SHOULD BE ENGAGED. LOCATIONS WITH UNDERGROUND POWER LINES - UNDERGROUND POWER LINES MAY BE LOCATED IN OR AROUND THE SITE. ALL UNDERGROUND POWER LINES MUST BE DISCONNECTED OR ACCURATELY LOCATED AND ADEQUATE WARNING SIGNS USED PRIOR TO ANY CONSTRUCTION, MAINTENANCE OR DEMOLITION WORK COMMENCING. LOCATIONS WITH OVERHEAD POWER LINES - OVERHEAD POWER LINES MAY BE LOCATED ON OR NEAR THE SITE. THESE POSE A RISK OF ELECTROCUTION IF STRUCK OR APPROACHED BY LIFTING DEVICES OR OTHER PLANT AND PERSONS WORKING ABOVE GROUND LEVEL. WHERE THERE IS A DANGER OF THIS OCCURRING, POWER LINES SHOULD BE, WHERE PRACTICAL, DISCONNECTED OR RELOCATED. WHERE THIS IS NOT PRACTICAL, ADEQUATE WARNING IN THE FORM OF BRIGHT-COLOURED TAPE OR SIGNAGE SHOULD BE USED, OR A PROTECTIVE BARRIER PROVIDED.

5. MANUAL TASKS

COMPONENTS WITHIN THIS DESIGN WITH A MASS IN EXCESS OF 25 KG SHOULD BE LIFTED BY TWO OR MORE WORKERS OR BY A MECHANICAL LIFTING DEVICE. WHERE THIS IS NOT PRACTICAL, SUPPLIERS OR FABRICATORS SHOULD BE REQUIRED TO LIMIT THE COMPONENT MASS. ALL MATERIAL PACKAGING, BUILDING AND MAINTENANCE COMPONENTS SHOULD CLEARLY SHOW THE TOTAL MASS OF PACKAGES AND WHERE PRACTICAL ALL ITEMS SHOULD BE STORED ON SITE IN A WAY THAT MINIMISES BENDING BEFORE LIFTING. ADVICE SHOULD BE PROVIDED ON SAFE LIFTING METHODS IN ALL AREAS WHERE LIFTING MAY OCCUR. CONSTRUCTION, MAINTENANCE AND DEMOLITION OF THE BUILDING WILL REQUIRE THE USE OF PORTABLE TOOLS AND EQUIPMENT. THESE SHOULD BE FULLY MAINTAINED IN ACCORDANCE WITH THE MANUFACTURERS' SPECIFICATIONS AND NOT USED WHERE FAULTY OR, IN THE CASE OF ELECTRICAL EQUIPMENT, NOT CARRYING A CURRENT ELECTRICAL SAFETY TAG. ALL SAFETY GUARDS AND DEVICES SHOULD BE REGULARLY CHECKED AND PERSONAL PROTECTIVE EQUIPMENT SHOULD BE USED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATION.

6. HAZARDOUS SUBSTANCES

6.1 ASBESTOS

FOR ALTERATIONS TO OR DEMOLITION OF A BUILDING CONSTRUCTED PRIOR TO 1990, IF THE BUILDING WAS CONSTRUCTED PRIOR TO: 1990 — IT MAY CONTAIN ASBESTOS 1986 — IT IS LIKELY TO CONTAIN ASBESTOS, EITHER CLADDING MATERIAL OR IN FIRE-RETARDANT INSULATION MATERIAL. IN EITHER CASE, THE BUILDER SHOULD CHECK AND, IF NECESSARY, TAKE APPROPRIATE ACTION BEFORE DEMOLISHING, CUTTING, SANDING, DRILLING OR OTHERWISE DISTURBING THE EXISTING STRUCTURE.

6.2 POWDERED MATERIALS

MANY MATERIALS USED IN CONSTRUCTION OF THIS BUILDING CAN CAUSE HARM IF INHALED IN POWDERED FORM. PERSONS WORKING ON OR IN THE BUILDING DURING CONSTRUCTION, OPERATIONAL MAINTENANCE OR DEMOLITION SHOULD ENSURE GOOD VENTILATION AND WEAR PERSONAL PROTECTIVE EQUIPMENT, INCLUDING PROTECTION AGAINST INHALATION WHILE USING POWDERED MATERIAL OR WHEN SANDING, DRILLING, CUTTING OR OTHERWISE DISTURBING OR CREATING POWDERED MATERIAL.

6.3 TREATED TIMBER

THE DESIGN OF THE BUILDING MAY INCLUDE PROVISION FOR INCLUSION OF TREATED TIMBER WITHIN THE STRUCTURE. DUST OR FUMES FROM THIS MATERIAL CAN BE HARMFUL. PERSONS WORKING ON OR IN THE BUILDING DURING CONSTRUCTION, OPERATIONAL MAINTENANCE OR DEMOLITION SHOULD ENSURE GOOD VENTILATION AND WEAR PERSONAL PROTECTIVE EQUIPMENT INCLUDING PROTECTION AGAINST INHALATION OF HARMFUL MATERIAL WHEN SANDING, DRILLING, CUTTING OR USING TREATED TIMBER IN ANY WAY THAT MAY CAUSE HARMFUL MATERIAL TO BE RELEASED. DO NOT BURN TREATED TIMBER.

6.4 VOLATILE ORGANIC COMPOUNDS

MANY TYPES OF GLUES, SOLVENTS, SPRAY PACKS, PAINTS, VARNISHES AND SOME CLEANING MATERIALS AND DISINFECTANTS HAVE DANGEROUS EMISSIONS. AREAS WHERE THESE ARE USED SHOULD BE KEPT WELL VENTILATED WHILE THE MATERIAL IS BEING USED AND FOR A PERIOD AFTER INSTALLATION. PERSONAL PROTECTIVE EQUIPMENT MAY ALSO BE REQUIRED. THE MANUFACTURERS' RECOMMENDATIONS FOR USE MUST BE CAREFULLY CONSIDERED AT ALL TIMES.

6.5 SYNTHETIC MINERAL FIBRE

GLASS FIBRE, ROCK WOOL, CERAMIC AND OTHER MATERIAL USED FOR THERMAL OR ACOUSTIC INSULATION MAY CONTAIN SYNTHETIC MINERAL FIBRE WHICH MAY BE HARMFUL IF INHALED, OR IF IT COMES INTO CONTACT WITH THE SKIN, EYES OR OTHER SENSITIVE PARTS OF THE BODY. PERSONAL PROTECTIVE EQUIPMENT, INCLUDING PROTECTION AGAINST INHALATION OF HARMFUL MATERIAL, SHOULD BE USED WHEN INSTALLING, REMOVING OR WORKING NEAR BULK INSULATION MATERIAL.

6.6 TIMBER FLOORS

THE BUILDING MAY CONTAIN TIMBER FLOORS THAT HAVE AN APPLIED FINISH. AREAS WHERE FINISHES ARE APPLIED SHOULD BE KEPT WELL VENTILATED DURING SANDING AND APPLICATION, AND FOR A PERIOD AFTER INSTALLATION. PERSONAL PROTECTIVE EQUIPMENT MAY ALSO BE REQUIRED. THE MANUFACTURER'S RECOMMENDATIONS FOR USE MUST BE CAREFULLY CONSIDERED AT ALL TIMES.

7. CONFINED SPACES

7.1 EXCAVATION

CONSTRUCTION OF THE BUILDING AND SOME MAINTENANCE ON THE BUILDING MAY REQUIRE EXCAVATION AND INSTALLATION OF ITEMS WITHIN THE EXCAVATION. WHERE PRACTICAL, INSTALLATION SHOULD BE CARRIED OUT USING METHODS THAT DO NOT REQUIRE WORKERS TO ENTER THE EXCAVATION. WHERE THIS IS NOT PRACTICAL, ADEQUATE SUPPORT FOR THE EXCAVATED AREA SHOULD BE PROVIDED TO PREVENT COLLAPSE. WARNING SIGNS AND BARRIERS TO PREVENT ACCIDENTAL OR UNAUTHORISED ACCESS TO ALL EXCAVATIONS SHOULD BE PROVIDED.

7.2 ENCLOSED SPACES

FOR BUILDINGS WITH ENCLOSED SPACES WHERE MAINTENANCE OR OTHER ACCESS MAY BE REQUIRED:

ENCLOSED SPACES WITHIN THE BUILDING MAY PRESENT A RISK TO PERSONS ENTERING FOR CONSTRUCTION, MAINTENANCE OR ANY OTHER PURPOSE. THE DESIGN DOCUMENTATION CALLS FOR WARNING SIGNS AND BARRIERS TO UNAUTHORISED ACCESS. WHERE WORKERS ARE REQUIRED TO ENTER ENCLOSED SPACES, AIR TESTING EQUIPMENT AND PERSONAL PROTECTIVE EQUIPMENT SHOULD BE PROVIDED.

7.3 SMALL SPACES

FOR BUILDINGS WITH SMALL SPACES WHERE MAINTENANCE OR OTHER ACCESS MAY BE REQUIRED:

SOME SMALL SPACES WITHIN THE BUILDING MAY REQUIRE ACCESS BY CONSTRUCTION AND MAINTENANCE WORKERS. THE DESIGN DOCUMENTATION CALLS FOR WARNING SIGNS AND BARRIERS TO UNAUTHORISED ACCESS. THESE SHOULD BE MAINTAINED THROUGHOUT THE LIFE OF THE BUILDING. WHERE WORKERS ARE REQUIRED TO ENTER SMALL SPACES, THEY SHOULD BE SCHEDULED SO THAT ACCESS IS FOR SHORT PERIODS. MANUAL LIFTING AND OTHER MANUAL ACTIVITY SHOULD BE RESTRICTED IN SMALL SPACES.

8. PUBLIC ACCESS

PUBLIC ACCESS TO CONSTRUCTION AND DEMOLITION SITES AND TO AREAS UNDER MAINTENANCE CAUSES RISK TO WORKERS AND THE PUBLIC. WARNING SIGNS AND SECURE BARRIERS TO UNAUTHORISED ACCESS SHOULD BE PROVIDED. WHERE ELECTRICAL INSTALLATIONS, EXCAVATIONS, PLANT OR LOOSE MATERIALS ARE PRESENT, THEY SHOULD BE SECURED WHEN NOT FULLY SUPERVISED.

9. OPERATIONAL USE OF BUILDING

RESIDENTIAL BUILDINGS THE BUILDING HAS BEEN DESIGNATED AS A RESIDENTIAL BUILDING. IF THE BUILDING, AT A LATER DATE, IS USED OR INTENDED FOR USE AS A WORKPLACE, THE PROVISIONS OF THE WORK HEALTH AND SAFETY ACT 2011 OR SUBSEQUENT REPLACEMENT LEGISLATION SHOULD BE APPLIED TO THE NEW USE.

NON-RESIDENTIAL BUILDINGS NON-RESIDENTIAL BUILDINGS WHERE THE END-USE HAS NOT BEEN IDENTIFIED: THE BUILDING HAS BEEN DESIGNED TO REQUIREMENTS OF THE CLASSIFICATION IDENTIFIED ON THE DRAWINGS. THE SPECIFIC USE OF THE BUILDING IS NOT KNOWN AT THE TIME OF THE DESIGN AND A FURTHER ASSESSMENT OF THE WORKPLACE HEALTH AND SAFETY ISSUES SHOULD BE UNDERTAKEN AT THE TIME OF FIT-OUT FOR THE END USER

NON-RESIDENTIAL BUILDINGS WHERE THE END-USE IS KNOWN: THE BUILDING HAS BEEN DESIGNED FOR THE SPECIFIC USE AS IDENTIFIED ON THE DRAWINGS. WHERE A CHANGE OF USE OCCURS AT A LATER DATE, A FURTHER ASSESSMENT OF THE WORKPLACE HEALTH AND SAFETY ISSUES SHOULD BE UNDERTAKEN.

10. OTHER HIGH-RISK ACTIVITY

ALL ELECTRICAL WORK SHOULD BE CARRIED OUT IN ACCORDANCE WITH CODE OF PRACTICE: MANAGING ELECTRICAL RISKS AT THE WORKPLACE, AS/NZS 3012 AND ALL LICENSING REQUIREMENTS.

ALL WORK USING PLANT SHOULD BE CARRIED OUT IN ACCORDANCE WITH CODE OF PRACTICE: MANAGING RISKS OF PLANT AT THE WORKPLACE.

ALL WORK SHOULD BE CARRIED OUT IN ACCORDANCE WITH CODE OF PRACTICE: MANAGING NOISE AND PREVENTING HEARING LOSS AT WORK.

DUE TO THE HISTORY OF SERIOUS INCIDENTS, IT IS RECOMMENDED THAT PARTICULAR CARE BE EXERCISED WHEN UNDERTAKING WORK INVOLVING STEEL CONSTRUCTION AND CONCRETE PLACEMENT. ALL THE ABOVE APPLIES.

THESE NOTES MUST BE READ AND UNDERSTOOD BY ALL INVOLVED IN THE PROJECT. THIS INCLUDES (BUT NOT LIMITED TO): OWNER, BUILDER, SUB-CONTRACTORS, CONSULTANTS, OPERATORS, RENOVATORS, MAINTAINERS AND DEMOLISHERS.