



National Demolition Training Group
TRAINING THE DEMOLITION INDUSTRY

DEMOLITION DO'S & DON'TS

Identifying potential hazards and adopting good practices in the demolition process.



NDTG MISSION STATEMENT

The National Demolition Training Group (NDTG) was formed in 1978 with the sole objective of providing specific and relevant training opportunities to demolition workers.

Today, that objective remains at the heart of NDTG.

Our Trainers and Assessors are fully qualified and have extensive experience in the Demolition Industry. The NDTG offers competence assessments and training from Site Operative level through to Managers level.

Development of new initiatives is made through out Management Committee made up of current Demolition Contractors who recognise your needs.

We build relationships with demolition training providers throughout the UK who all work to the NDTG approved standard.

INTRODUCTION

This booklet has been produced as a guide in identifying potential hazards and adopting good practices by all involved in the demolition process. The people who most benefit from this guide will include new starters, labourers, DRO's, and plant operators.

The Construction (Design & Management) Regulations 2015 and the British Standard Code of Practice for Full & Partial Demolition (BS 6187:2011) state that "The arrangements for carrying out demolition or dismantling shall be recorded in writing before the demolition or dismantling work begins" so a method statement **MUST** be in place for ALL demolition projects big or small, this will be referred to as RAMS; Risk Assessment & Method Statement.

We are all aware of the need to plan demolition works and to identify significant hazards that are specific to each project. Follow the instructions given in these documents, **do not** change methods or processes without checking with your chargehand / supervisor or site manager. Induction Training, Daily Task Briefings, and Toolbox Talks are useful aids to informing the workforce of known hazards and reminding them of the need to be always stay alert.

However, accidents continue to happen. 'Why'? Because in general, accidents are unexpected and unplanned occurrences. They often happen when people are untrained or take shortcuts.

Consider the consequences of your next action. Remember; every action has a reaction and potential consequence.

This booklet should remind us of all the things that sometimes get overlooked due to pressure of work, lack of experience and historic bad practice, i.e. "We have always done it this way in the past." Remember **SAFETY IS NO ACCIDENT**.

IF YOU ARE UNSURE OF ANY DEMOLITION WORK PROCEDURES, ASK. IF YOU ARE STILL IN DOUBT, ASK AGAIN.

This is intended as a one-size-fits-all document, it does not account for specific unique circumstances that may arise, such as training an individual or undertaking works following an incident for example.

Whilst this booklet is current at the time of print, any updates will be downloadable by visiting www.nfdc-demolition.com



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WORKING WITH ASBESTOS

Asbestos fibres kill over five thousand each year in the UK from asbestos- related diseases; this is due to past exposure from working on materials that contained asbestos.

Thousands of tons of asbestos, placed into over three thousand products, are still in place in older buildings. The danger to you comes from drilling, cutting, breaking or disturbing materials made from asbestos and breathing in the fibres.

You will find asbestos:

- As a sprayed insulated coating on steelwork and concrete, etc.
- As lagging on pipes, boilers, etc.
- As insulation board (AIB) in walls, ceiling tiles, on and within fire doors, fire breaks in the loft space, within soffit boards etc.
- As asbestos cement for roof and wall coverings, pipes and tanks, etc.
- In some decorative plasters. (Artex)
- As gaskets, braided cloths, rope and seals.

This list is indicative only. Asbestos materials may be found in many locations, even under the slabs and within the walls and frame of a building.

NO REFURBISHMENT & DEMOLITION SURVEY – NO WORK SHOULD COMMENCE.

If any suspect material is found that is not within the Refurbishment & Demolition Survey, treat it as asbestos, report to your supervisor, vacate the area until the material has been tested by a qualified, competent person and the results are known. If in doubt stop work and ask.

Depending on the result the work may have to be carried out by a licensed asbestos removal contractor.

All personnel on a demolition site should have attended an asbestos awareness course as a minimum.

Further specialist training is a legal requirement essential for the removal of asbestos containing materials.

WORKING WITH ASBESTOS – DON'TS

- ✗ Use power tools on asbestos materials; they create dust.
- ✗ Wear disposable overalls or RPE to the welfare facilities.
- ✗ Take protective or everyday clothing contaminated with asbestos home for washing.



ENVIRONMENTAL SUSTAINABILITY – DO'S

- ✓ Do segregate separate materials streams and arising heaps.
- ✓ Do store fluorescent tubes carefully in the approved containers
- ✓ Do report any spillages to your chargehand / supervisor immediately, and warn others to keep clear.
- ✓ Do retain / contain any spill, and clear away in the appropriate containers.
- ✓ Keep environmental disturbance pollutants to a minimum (noise, light, dust, etc).
- ✓ Do pay attention to any site ecology reports there are serious implications for disturbing bats, crested newts & certain fauna.
- ✓ Do keep site tidy of all litter.
- ✓ Hand to your site supervisor ALL delivery / waste transfer notes.
- ✓ Ensure you are aware of all identified hazardous substances.

ENVIRONMENTAL SUSTAINABILITY – DON'TS

- ✗ Unnecessarily break fluorescent tubes.
- ✗ Burn rubbish on site.
- ✗ Mix demolition arisings unnecessarily.
- ✗ Mix hazardous materials.
- ✗ Pour any liquid wastes down drains.
- ✗ Lose any waste transfer notes.

DO'S AND DON'TS FOR DEMOLITION

This information should be of benefit to all site personnel.

- A safe site is a tidy site.
- A safe site is an efficient site.
- A safe site has a competent workforce (trained; experienced and qualified).
- A safe operative stops, looks, and thinks prior to work.
- A safe site has an efficient site supervisor.
- A safe site has a manager that manages safely.
- A safe site has a company that will gain in reputation .



DEMOLITION OPERATIVES – DO'S

- ✓ Make sure that you have a hard hat, hi-viz and safety boots and any other PPE / RPE as identified within the RAMS.
- ✓ Sign in and out of site.
- ✓ Ensure you attend the site induction and have received and understood all information in the RAMS concerning asbestos & hazardous materials, red exclusion zones and amber working zones.
- ✓ Ask for further personal protective or respiratory equipment for any given task (i.e., hands, eyes, ears, skin and breathing protection) as per the risk assessment.
- ✓ Ensure RPE is face fitted to you.
- ✓ Tell your supervisor if you have not been trained or are unfamiliar with a particular task.
- ✓ Inform your supervisor if you see someone working unsafely.
- ✓ Inform your supervisors and workmates if you see a hazardous or unsafe situation.
- ✓ Report to your supervisor if you see any material that could contain asbestos that is not identified on the Refurbishment & Demolition Survey. **STOP** work & **CLEAR** the area.
- ✓ Ensure that safety fencing or barriers erected for site safety are always maintained and secure.
- ✓ Wash your hands before eating, drinking or smoking.
- ✓ Remove overalls and wash before taking meal breaks or going home.
- ✓ Ensure you are familiar with site emergency procedures such as evacuation routes, muster point, first aiders, etc.

DEMOLITION OPERATIVES – DON'TS

- ✗ Start work until you have been inducted to the site and importantly are aware of any designated red exclusion zones **"NO GO AREAS"**.
- ✗ Start work until you have read or have had the (RAMS) explained to you; and you have signed the Briefing sheet. If in doubt ask.
- ✗ Start work until you have been instructed on the correct use of any PPE / RPE issued.
- ✗ Use RPE if not face fit tested or clean shaven.
- ✗ Attempt to do work that you are unfamiliar with or have not been trained for.
- ✗ Place a board or solid sheet over a hole or void without marking the hazard and informing your chargehand / supervisor.
- ✗ Work at height without suitable & sufficient training
- ✗ Leave the site access gates open especially the vehicle access point.
- ✗ Unclip the 'Heras' fencing when accessing or exiting site unless in an absolute emergency.
- ✗ Enter any red exclusion zones.
- ✗ Do not just assume a service is disconnected **CHECK** with your chargehand / supervisor.
- ✗ Remove any temporary support systems.

INTERNAL STRIP OUT – DO'S

- ✓ Always follow the current RAMS. IF IN DOUBT ASK!
- ✓ Be aware of hazards that may be present when handling abandoned materials as per the risk assessment.
- ✓ Check with chargehand / supervisor that all grid services have been isolated / disconnected. IF IN DOUBT ASK!
- ✓ Ensure safe access and egress to the works areas are always maintained.
- ✓ Ensure that you know where to muster in the event of a fire or emergency arising and that you can recognise the alarm when given.
- ✓ Look out for needles and other sharp objects that may well be contaminated, if you injure yourself report to your chargehand / supervisor immediately.
- ✓ Prevent overloading of floors, clear arisings progressively.
- ✓ Ensure designated drop chutes / shafts are used with full control measure in place to remove materials.
- ✓ Always wear, suitable, adequate and appropriate PPE / RPE as per the risk assessment.
- ✓ Wash before eating, drinking or smoking.
- ✓ Remove arisings from site progressively to prevent a build-up and fire hazard.
- ✓ On completion of work, remove all working tools and inspect all areas to ensure they are left in a safe condition.
- ✓ Ensure that all hot work is carried out in accordance with the hot works permit.
- ✓ If carrying out any hot cutting work clear the area of all combustible materials.
- ✓ Work from the top when removing internal walls and partitions.

INTERNAL STRIP OUT – DON'TS

- ✗ Remove any load bearing structure; your supervisor should advise you of this status and it will be identified within the RAMS.
- ✗ Cut any services until confirmed safe. IF IN DOUBT ASK!
- ✗ Use disc cutters / grinders unless you are trained in their use.
- ✗ Under-cut internal walls during strip out.
- ✗ Allow material to accumulate on floors as this may cause trip / fire hazards.
- ✗ Allow material / arising to build up on unsupported or uncontrolled areas.
- ✗ Remove temporary works support systems.
- ✗ Remove any soft strip material that may contain asbestos or other contaminated materials.

Site supervisor to secure site and ensure all materials are stacked in a safe manner so as to eliminate risk of further hazards.

WORKING AT HEIGHT – DO'S

- ✓ Ensure that access scaffolding has been erected correctly and has been inspected prior to use.
- ✓ Ensure that only trained personnel erect any scaffolding towers.
- ✓ Ensure that access ladders are in good condition and are securely tied or footed at the correct angle 75 degrees.
- ✓ Ensure edge protection is securely fixed and in correct place.
- ✓ Ensure that any wheel stop blocks used are maintained and checked regularly.
- ✓ Erect and maintain a red exclusion zone below any PASMA tower with adequate signage posted to inform others.
- ✓ Wear a safety harness attached to a suitable and safe anchorage point above head height when there is risk of falling.
- ✓ Ensure safety harness is correctly fitted and has an 'in date' inspection certification.
- ✓ Ensure that you have received proper training in the fitting and use of safety harness.
- ✓ Ensure safe access and egress during working procedures.

WORKING AT HEIGHT – DON'TS

- ✗ Use any scaffolding or access equipment that has not been tested and inspected by a competent person.
- ✗ Cover holes in floors with sheet materials, without erecting hazard signs and reporting it to your chargehand / supervisor.
- ✗ Work at height without adequate edge protection.
- ✗ Overload floors; always clear away arisings progressively.
- ✗ Remove any scaffold ties.
- ✗ Use ladders as a working platform.
- ✗ Work at height when other safer work methods are available.
- ✗ Work directly above live areas, where members of the public are present or around the access / egress areas.

IF IN DOUBT, ASK ABOUT THE
INTENDED DEMOLITION WORK
PROCEDURES OR PROCESSES

HOT WORKS – DO'S

- ✓ Ensure your specialist training is up to date.
- ✓ Ensure that all safety features are in place before hot cutting, i.e., flashback arrestors, end of pipe non return valves etc.
- ✓ Personally, check that your hot cutting equipment i.e., burning guns, gauges, flashback arrestors and gas bottles are clean and free from oils or grease.
- ✓ Ensure equipment is fitted with approved connectors.
- ✓ Ensure that oxygen / fuel gas bottles are always stored in a secure well ventilated location, and restrained. (Ref: BCGA CP7)
- ✓ Clear combustible materials away from hot works and adjacent areas.
- ✓ Place damped material or sand below cutting point as necessary.
- ✓ Ensure appropriate fire-fighting equipment is on hand during all hot works.
- ✓ Erect physical barriers and amber restricted zone warning signs around the hot cutting area.
- ✓ Ensure a tested oronasal mask complete with appropriate filter (or appropriate filtered powered helmet respirator) at all times when cutting is taking place.

HOT WORKS – DO'S

- ✓ Leak test the equipment every time you purge air from the system.
- ✓ Disassemble / reassemble all equipment at least once a week and register the inspection in the site paperwork with your chargehand / supervisor.
- ✓ Always drain fuel gas / oxygen from system if leaving unattended for significant period i.e., tea break, lunch break.
- ✓ Always disassemble / remove oxygen / fuel cutting equipment from the bottles / pack at the end of each day.
- ✓ Always wear hearing protection when operating oxygen / fuel cutting equipment.
- ✓ Ensure grinding safety guard is in the appropriate position for cut to be made.
- ✓ Ensure the cutting wheel on the machine is installed by an appropriately trained operative.
- ✓ Ensure that the appropriate cutting disk is installed for the work being undertaken.

HOT WORKS – DO'S

Coated Surfaces

- ✓ Check with chargehand / supervisor that analysis of any coatings has been undertaken, i.e., lead paint, galvanised paint, two-pack paints or other hazardous materials.
- ✓ Ensure you are wearing the appropriate RPE with correct filters for the materials being cut.
- ✓ Adopt strict personal hygiene regiments, using hot water, soap and towels.
- ✓ Ensure that all personnel not engaged in the works are upwind and clear of the hot works area.

Tanks, Containers, Pipelines and Vessels

- ✓ Ensure current (within 24 hours) gas free certification (gas test and purging of pipework, tanks and vessels) is carried out prior to starting work and is included in your job paperwork.
- ✓ Make initial break into any pipework, tank or vessel by employing cold cutting methods – e.g., mechanical shear, reciprocating saws, power drill.

HOT WORKS – DON'TS

- ✗ Fix or repair any leaking equipment. Get it replaced.
- ✗ Operate hot cutting equipment within an enclosed space because of fumes, leakage of fuel and or oxygen gases (unless a risk assessment of multiple gas analyzer is present).
- ✗ Use Oxygen to blow dust off clothing, or to cool yourself down.
- ✗ Carry or use petrol or gas lighters to ignite the cutting torch. Only use approved flint guns.
- ✗ Rely on existing site fire points. Ensure appropriate additional fire extinguishers are in place prior to commencement of hot works.
- ✗ Change a cutting / grinding disk unless appropriately trained.
- ✗ Twist or bend a cutting / grinding disk whilst in work.

IF IN DOUBT, ASK ABOUT THE
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PROCEDURES OR PROCESSES

HAND-HELD PERCUSSIVE TOOLS – DO’S

- ✓ Ensure that the equipment is in good working order and that the points / chisels are sharp.
- ✓ Ensure you are briefed in maximum usage time “trigger time” for ALL percussive tools used.
- ✓ Ensure that you have been suitably trained for the equipment in use.
- ✓ Ensure that a Hearing Protection Zone has been established around the work area and signs are displayed to warn anyone approaching.
- ✓ Ensure that all hearing protection is worn if the noise levels are at or above the upper exposure value.
- ✓ Keep your chargehand informed of your trigger times to enable your exposure records to be kept accurately.
- ✓ Ensure that your break and rest times are always strictly adhered to in accordance with hand-held vibrating tools as per daily log.
- ✓ Wear thick warm gloves when using power tools to keep hands protected and warm to aid in good blood circulation.

HAND-HELD PERCUSSIVE TOOLS – DON'TS

- ✗ Do not exceed your daily maximum exposure amount (Exposure Limit Value ELV).
- ✗ Do not use damaged tools or points.
- ✗ Do not remove any safety guarding.
- ✗ Do not operate handheld vibrating tools without hearing protection.
- ✗ Do not operate handheld vibrating tools without hand protection.
- ✗ Do not operate handheld vibrating tools without eye protection.



PLANT OPERATORS – DO'S

- ✓ Walk around the building and access route with your chargehand / supervisor before starting structural demolition works, ask for advice if you are not sure of any point.
- ✓ Be familiar with the structure and location of adjacent buildings, service runs, basements, voids and retained areas. Check for basements, ducts, pipelines, voids and underground tanks. Back fill correctly before travelling or working over with a machine.
- ✓ Be aware of any noted asbestos or other hazardous materials. Stop work immediately and report to your chargehand / supervisor if you suspect any hazardous materials are exposed during your work.
- ✓ Work in strict accordance with the agreed Risk Assessment Method Statements (RAMS), demolition sequence plans & Engineering designs as applicable.
- ✓ Agree on your work area with the chargehand / supervisor and sentry / banksman. Red total exclusion zone: amber qualified personnel only.
- ✓ Discuss the RAMS with your chargehand / supervisor and sentry / banksman so that they are aware of your intentions.
- ✓ Arrange and agree a means of communicating with your chargehand / supervisor and sentry / banksman. Ensure a safe procedure as detailed within the RAMS has been agreed with all operatives on site.
- ✓ Check your machine before use for defects and that attachments are properly fitted.
- ✓ Check for overhead and proximity hazards before travelling or operating the machine.
- ✓ Ensure that quick hitches, if fitted, are used in accordance with manufacturer instructions and work correctly.
- ✓ Ensure that the machine has the capability to reach the structure to be demolished.
- ✓ Ensure that the any raised platform is well compacted and constructed as per temporary works designs & NFDC guidance notes for use of high reach machines.

PLANT OPERATORS – DO'S

- ✓ Ensure that you demolish with the machine facing the structure, track motors to the rear and that the boom is kept within the designed working radius.
- ✓ Work progressively from the top down to reduce the structure in a systematic and progressive manner.
- ✓ Ensure that machine mounted dust suppression equipment is fully operational and working efficiently.
- ✓ Travel to and egress your machine within the Amber restricted zone.
- ✓ Do retract / lower any tilting raised cab before exiting the vehicle.
- ✓ Park the machine with the equipment lowered to the ground, stopping the engine, removing the keys and wearing the appropriate RPE & PPE as you cross site to the green zone.
- ✓ Do keep the cab clean, tidy and free of any obstructions around feet pedals.
- ✓ Ensure the seatbelt / safety bar is in place prior to operation.

PLANT OPERATOR – DON'TS

- ✗ Allow debris to accumulate and overload partially demolished floors.
- ✗ Overreach (“stretch”) outside the machine’s designed working radius.
- ✗ Travel on uneven ground with the boom raised upright.
- ✗ Travel across unproven ground.
- ✗ Allow untrained or inexperienced operatives to operate your machine.
- ✗ Encourage any person into machine working red exclusion zone.
- ✗ Use rebar or other similar material to secure attachment retaining pins.
- ✗ Remove any asbestos containing materials without non-licensed asbestos removal training.
- ✗ Get out of your machine until it has been travelled away from the red exclusion zone and parked correctly as per the NFDC demolition machine guidance notes.

IF IN DOUBT, ASK ABOUT THE
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PROCEDURES OR PROCESSES

QUICK HITCH DEVICES – DO’S

- ✓ Ensure the manufacturer’s operation manual is adhered to at all times.
- ✓ Establish an amber restricted working safe zone, free from other workers when undertaking any detachment or attachment activities.
- ✓ Ensure you have a sufficient spill kit available whilst changing attachments and re fuelling.
- ✓ Ensure that only the manufacturer’s-specific retaining pins are used on manual hitch systems.
- ✓ Ensure that only the manufacturer’s-specific locking clips are used on semi-automatic hitches.
- ✓ Ensure that the locking pin and safety clip has been visually checked and is correctly in place on the quick hitch before starting the work and every time a different attachment is fitted.
- ✓ Use the ‘Bump’ test to ensure the attachment on all types of hitches are secure before starting work.
- ✓ Fully cycle the hydraulic systems as per manufacturer’s instructions on any fully automated hitch.
- ✓ Report any suspect or defective quick hitch coupler immediately to your chargehand / supervisor.
- ✓ Be aware that when using a quick hitch, this will extend the operating radius which may cause the attachment to meet the cab when fully crowded back.
- ✓ Remember that when fitted with a ‘Quick Hitch’ coupler the overall weight of the machine will be increased and therefore it may influence the stability of the machine when the boom and dipper are fully extended.

QUICK HITCH DEVICES – DON'TS

- ✗ Operate machine without the proper locking pins / clips in place.
- ✗ Swing the bucket or attachment over the workers and **NEVER** let workers under the bucket or attachments.
- ✗ Operate an unsafe quick hitch.
- ✗ Use **any** equipment if you have not been trained on its operation and maintenance.
- ✗ Use the coupler to pick and place without locking the attachment to the quick hitch.
- ✗ Use re-bar as a locking clip to secure attachment pins.
- ✗ Allow debris or ingress material to interfere with the connection surfaces on fully automated hitches.

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