10 Manual Handling

This chapter is split into two parts:

Part 1: Directive. This part provides direction that you **must** follow to help you comply with (keep to) health and safety law, Government policy and Defence policy.

Part 2: Guidance. This part provides the guidance and good practice that **should** be followed and will help you to keep to this policy.

Contents

Title	Page
Amendment record	2
Terms and definitions	2
Scope	3
Assurance	3
Alternative acceptable means of compliance	3
Part 1: Directive	
Introduction	4
Key health and safety legislation	4
Policy Statements	5
Part 2: Guidance	
Identifying hazards	13
Managing manual handling risks	16
Recording, communicating and reviewing manual handling risks	18
Manual handling training	19
Retention of records	19
Related documents	19
Annex A - Manual Handling Risk Assessment Flowchart	A1
Annex B - Guidance Weights	B1
Annex C - Correct Lifting Techniques	C1
Annex D - MOD Form 5012 & 5012A Guidance Notes	D1

Amendment Record

This chapter has been reviewed by the Directorate of Defence Safety (DDS) together with relevant subject matter experts and key safety stakeholders. Any suggestions for amendments **should** in the first instance be directed to the Defence organisation's Safety Centre/Team Group Mailbox and with their approval, sent to People-DDS-GroupMailbox@mod.gov.uk.

Version No	Date Published	Text Affected	Authority
1.2	Oct 20	Interim update post-handover of Policy from DSA to D HS&EP.	D HS&EP
1.3	Jan 22	Updated to remove reference to maturity and bring the definition of a competent person in line with the HSE[1] definition of competence.	D HS&EP
1.4	04 Jun 25	Release of two-part chapter structure. Improved guidance on how & when to risk assess, and closer link to HSE guidance. Annexes updated.	DDS

Terms and definitions

The following table sets out definitions of some of the key terms used in this chapter. The general safety terms and definitions are provided in the Master Glossary of Safety Terms and Definitions which can also be accessed on GOV.UK.

Accountable person	The person whose terms of reference state that they are responsible for making sure there are suitable and sufficient systems in place to control health and safety risks in their unit, estate (site) or platform. This term is used in place of CO, HoE, OC, Station Commander and so on, or as decreed by the Defence organisations.
Commander	This is generally a military person responsible for planning activities, supervising activities, and making sure that personnel under their area of responsibility are safe. This term refers to a role rather than the rank of Commander, and it can be a permanent or temporary role (for example, lasting for the duration of an exercise). In parts of Defence this person could be referred to as a 'responsible person.'
Competent person	A person who has the training, skills, experience, and knowledge necessary to perform a task safely, and is able to apply them. Other factors, such as attitude and physical ability, can also affect someone's competence. (See www.hse.gov.uk/competence/what-is-competence.htm for information on competence).
Manager	A person responsible for managing or supervising staff, planning activities, and making sure that personnel under their area of responsibility are safe. This could be a permanent or temporary role, and in parts of Defence this person could be referred to as a 'line manager,' a 'responsible person' or a 'delivery manager.'
Manual Handling	The act of transporting or supporting a load by hand or bodily force. (HSE).

So far as is reasonably practicable (SFAIRP)	Legal phrase used in Health and Safety at Work Act and so on 1974, which is alternatively referred to as 'As low as reasonably practicable' (ALARP), the degree of risk where the trouble, time and money needed to reduce that risk starts to become disproportional to the derived benefit.
Tolerable (risk)	A level of risk that we are willing to accept in order to perform an activity or achieve an outcome. A tolerable risk is one that is considered to be worth taking, if it has been evaluated and is being managed.

Must and should

Where this chapter says **must**, this means that the action is a compulsory requirement.

Where this chapter says **should**, this means that the action is not a compulsory requirement but is considered good practice.

Scope

The policy contained within this chapter:

a. applies to all those employed by Defence (military and civilian) including those under the age of 18 (for example recruits and apprentices).

b. applies to all those working on behalf of, or under the supervision of Defence (for example, contractors or visitors).

c. applies to all Defence activities carried out in any location (UK or overseas) and at all times of the year.

d. is not written for young persons in the cadet forces[1], Defence-run schools, nurseries and so on; those organisations **must** maintain their own safety policies and governance and **must** provide statutory compliant infrastructure and appropriate safe systems of work. They may use material from this chapter as a reference point, but where appropriate their respective policies **should** be adapted to meet the needs of young persons and to follow any applicable Department for Education guidelines or legislation.

Assurance

The application of the policy contained within this chapter **must** be assured (that is, its use **must** be guaranteed). As part of their overall assurance activity, the commander, manager, or accountable person **must** make sure that this policy is followed and put into practice effectively. Assurance **must** be carried out in accordance with JSP 815 (Defence Safety Management System) Element 12 – Assurance.

Alternative acceptable means of compliance

This policy is mandatory across Defence, and the only acceptable means of compliance (AMC) is attained by following the directive set out in this chapter. However, there may be circumstances where a small number of military units may be permanently unable to comply with (keep to) parts of the policy. In such circumstances an alternative AMC process is set out in the JSP 375 Directive and Guidance.

[1] Guidance for cadet forces is set out in JSP 814 (Policy and Regulations for Ministry of Defence Sponsored Cadet Forces).

Part 1: Directive

Introduction

1. Manual handling activities are classed as activities that require a person to lift, lower, carry, push, pull, move a load by hand or bodily force. The poor management and practice of manual handling activities often result in musculoskeletal disorders (MSDs) which include injuries and conditions that can cause pain to the back, joints, and limbs. Manual handling accounts for approximately 17% of all non-fatal, work-related injuries reported to the Health and Safety Executive[2].

2. Defence has a duty to protect its workers from the risk of injury and ill health from hazardous manual handling activities in the workplace. This policy chapter will help commanders and managers to manage that risk, and to identify when a manual handling activity is hazardous enough to require a manual handling risk assessment (MHRA).

Key health and safety legislation

3. Employers have a general duty under the Health and Safety at Work etc. Act (HSWA) 1974, Section 2, to ensure, so far as is reasonably practicable (SFAIRP), the health, safety and welfare of all of their employees and, under Section 3, anyone else who may be affected by that work activity. The legislation requires employers to fulfil their legal requirements by reducing risks as low as is reasonably practicable (ALARP).

4. There is also a duty on employers under the Management of Health and Safety at Work Regulations (MHSWR) 1999 to carry out a suitable and sufficient assessment of the risks to the health and safety of their employees. As such, Defence requires commanders, managers and accountable persons to make sure that suitable and sufficient risk assessments are carried out in order to mitigate health and safety risks to the personnel under their area of responsibility and anyone else who may be affected by that work activity.

5. The Secretary of State (SofS) for Defence Policy Statement on health and safety, sets out the SofS's commitment for Defence to comply with the all applicable health and safety legislation when in the United Kingdom (UK). When overseas, we will comply with the laws of Host States, where they apply to us, and in circumstances where such requirements fall short of UK requirements, we will apply UK standards SFAIRP to do so.

6. This chapter provides the direction and guidance on the MHRA process and the responsibilities for implementing control measures in compliance with the Manual Handling Operations Regulations 1992 (as amended) (MHOR) and the MGN 90 (M+F) Amendment 3 Merchant Shipping and Fishing Vessels (Manual Handling Operations) Regulations to reduce the risk of injury from manual handling SFAIRP.

7. The MHOR require employers to risk assess the transporting or supporting of a load, according to the hierarchy of risk controls[3] and introduce management control measures to reduce the risk of injury to a level that is as low as is reasonably practicable.

[2] Based on 23/24 HSE Accident Statistics
[3] Schedule 1 of the Management of H&S at Work Regulations 1999.

8. All workplace risk assessments **must** be carried out in accordance with Chapter 8 (Safety risk assessment and safe systems of work) of JSP 375 Volume 1, the additional information required for carrying out risk assessments for manual handling activities are set out in this chapter.

Policy Statements

9. Defence has established the following policy statements, which **must** be followed.

a. **Policy Statement 1.** The commander, manager or accountable person **must** make sure that a suitable and sufficient manual handling risk assessment is undertaken for manual handling activities under their area of responsibility. The risk assessment **must** identify the associated hazards from the manual handling activities and who may be at risk.

b. **Policy Statement 2.** The commander, manager or accountable person **must** make sure that manual handling is appropriately managed as a workplace hazard and, where applicable, suitable and sufficient control measures are in place, are followed, and reduce the risks to ALARP and tolerable.

c. **Policy Statement 3.** The commander, manager or accountable person **must** record and retain the findings of the manual handling risk assessment and communicate the information to those who may be harmed, along with the details of any necessary control measures.

d. **Policy Statement 4.** The commander, manager or accountable person **must** make sure that all risk assessments are reviewed at a frequency that is proportionate to the level of risk.

e. **Policy Statement 5.** The commander, manager or accountable person **must** make sure that personnel are suitably trained to conduct manual handling activities, including the use of manual handling aids, and are adequately supervised.

Policy Statement 1
The commander, manager or accountable person **must** make sure that a suitable and sufficient manual handling risk assessment is undertaken for manual handling activities under their area of responsibility. The risk assessment **must** identify the associated hazards from the manual handling activities and who may be at risk.

10. The commander, manager or accountable person **must** consider the activities in their area of responsibility and decide if manual handling is necessary. Where there is no alternative to undertaking manual handling activities the commander, manager or accountable person **must** make sure that a suitable and sufficient manual handling risk assessment (MHRA) is carried out. The MHRA **must** identify the associated hazards and who may be at risk of harm from undertaking those activities.

11. The commander, manager or accountable person **must** decide whether the manual handling activities are reasonable for the physical capabilities of the personnel that are required to do them and consider how this risk could be eliminated or reduced to a level that is as low as reasonably practicable (ALARP) and tolerable.

12. The commander, manager or accountable person may delegate the responsibility for carrying out a MHRA, but this **must** be to a competent person and where possible with the cooperation of supervisors and those personnel undertaking the activity.

13. Where responsibility for conducting the MHRA has been delegated to a competent person, they **must** inform the commander, manager, or accountable person of the findings of the assessment and, if appropriate, explain the risks and the control measures that are required to manage those risks.

14. Where the risks associated with manual handling activities are considered to be low enough, then an MHRA may not be required and a more dynamic evaluation may suffice, (Manual handling at work: Assess manual handling you can't avoid - HSE). An MHRA may not be required if all of the following criteria is met:

a. the load weight is less than the HSE guidance weights and lifting/lowering positions shown at Annex B;

b. the manual handling task does not have a high frequency or process rate, for example no more than 2 lifts per minute;

c. the manual handling task does not require extremes of movement such as twisting, bending, or over-reaching;

d. the individual carrying out the task is not limited in any way (too tall in a compact environment, limb injury, relevant disability and so on);

e. the load does not have unusual dimensions, is not an awkward shape or is difficult to grip; and

f. the working environment has adequate space, lighting, temperature, floor conditions and so on.

Note: In addition to the above list, the level of training personnel have received **should** also be considered when evaluating the activity.

15. Assessing whether manual handling activities are low-risk or not is subjective and if there are any doubts then a MHRA **must** be carried out. The MHRA Flowchart at Annex A and the information below will assist commanders, managers, and accountable persons to determine what level of MHRA is required.

16. The guideline weights shown in Annex B can be used as an aid when dynamically evaluating a manual handling activity and assumes the pace of work is not forced, there are adequate times to rest, and the load is not held for any prolonged period of time. The weights suggested **must** be reduced if the operation is repeated more often.

17. Commanders, managers or accountable persons **must** identify the associated hazards and potential harm that manual handling activities may cause. Wherever the risk assessment identifies hazards that have the potential to cause harm from manual handling activities, the hazards **must** be assessed and evaluated by a competent person (in conjunction with the personnel undertaking the activity) who has knowledge of the process / activity, and in what environments the activity is likely to be carried out.

18. Where a manual handling hazard(s) is present in the workplace, or as a part of a working activity, it **must** be included on the general risk assessment[4], and the assessor **must** follow the steps set out in Chapter 8 (Safety risk assessment and safe systems of work) of JSP 375 Vol 1

[4] In this chapter "General risk assessment" refers to either a specific or generic risk assessment, normally completed on a MOD Form 5010.

19. If it is determined that an MHRA is required, the MHRA reference number **must** be included on the MOD Form 5010 (or equivalent), and any control measures identified on the MHRA **should** be linked or referenced on the general risk assessment for the activity.

20. In order to determine who may be harmed by manual handling activities the commander, manager or accountable person **must** take into account the physical capability of the individuals that are expected to undertake those activities such as their physical condition, age, sex, disability, pregnancy, health and so on. It is not always necessary to assess every individual, it can be acceptable in some circumstances to do a generic assessment that is common to a group of personnel and / or for similar operations. The main point is to identify the risk of injury and highlight how to make practical improvements to reduce those risks.

Policy Statement 2
The commander, manager or accountable person **must** make sure that manual handling is appropriately managed as a workplace hazard and, where applicable, suitable and sufficient control measures are in place, are followed, and reduce the risks to ALARP and tolerable.

21. When assessing the risk of manual handling, suitable and sufficient control measures **must** be identified and implemented.

22. Commanders, managers, and accountable persons **must** demonstrate that they have done all that is 'reasonably practicable' in the circumstances to reduce risk, this may be demonstrated by raising any outstanding issues up through the correct Chain of Command.

23. The commander, manager or accountable person **must** follow the hierarchy of control measures (set out in Chapter 8 of JSP 375, Vol 1) to determine whether it is reasonably practicable to avoid manual handling entirely by considering the following:

a. Can the work be done in a different way?

b. Does the load really need to be moved (can the activity be done safely where it already is by redesigning the task)?

c. Can products or materials be delivered directly to where they will be used?

24. The HSE (INDG143) sets out a specific manual handling hierarchy of control measures which **must** also be considered, and will be followed if completing the MOD Form 5012 / 5012A. This additional hierarchy is as follows:

a. Avoid hazardous manual handling operations SFAIRP by addressing the following questions:

(1) Can movement of the loads be eliminated altogether? for example can the workplace or task be redesigned to avoid moving loads or could delivery be arranged to the point of use?

(2) Can operations be automated?

(3) Can mechanical devices be used (for example trucks, barrows, rollers, handling aids, forklift trucks, sack trucks)?

b. Make a suitable and sufficient risk assessment of the risk of injury of any hazardous manual handling operations that cannot be avoided; and

c. Reduce the risk of injury for operations SFAIRP; this can be done by improvements to the task and load (for example reduce the load size and / or distance travelled; consider a team load).

25. If handling a load cannot be avoided then the commander, manager or accountable person **must** consider whether the activity can be automated or mechanised to eliminate the manual part of the handling by using, for example, cranes, forklift trucks, conveyors, chutes and so on.

26. The commander, manager or accountable person **must** make sure that any control measures identified to mitigate the risk of manual handling, in any risk assessment, are implemented.

27. The commander, manager or accountable person **must** assess the effectiveness of risk control measures from all associated risk assessments and identify any further controls that may be required. This is part of demonstrating all that is 'reasonably practicable' to reduce the risk has been done, and any outstanding issues have been elevated up through their Chain of Command.

28. The commander, manager or accountable person **must** make sure that the risk associated with the handling and transport (including manual handling) of articles and substances is reduced to a level that is ALARP and tolerable.

29. The commander, manager or accountable person **must** make sure that where items are stored that will require manual handling, that they are done so safely with a view to minimise the risk of manual handling. For example, large and / or heavy loads **should** be stored at a safe lifting height for the persons who are expected to handle them, or items that are more frequently handled **should** be at approximately waist – shoulder height.

30. The Equality Act 2010 places a duty on employers to make reasonable adjustments to the workplace or employment arrangements (including risk control measures) to make sure that personnel (for example new or expectant mothers, young persons, and those with disabilities and so on) are not placed at a disadvantage.

31. Allowances **must** be made for any condition which the employer could be reasonably expected to be aware of and which might have bearing on the ability to carry out manual handling operations safely (advice **should** be sought from Occupational Health where appropriate).

32. Personnel engaged in manual handling **must** inform their commander, manager, or accountable person of any physical or medical condition that could affect their ability to safely undertake any manual handling activities.

33. The commander, manager or accountable person **must** make sure that if young persons (those under 18) are taking part in higher-impact manual handling activities (those activities that have a MHRA, and is assessed as a medium-high risk), that those young persons are appropriately supervised in accordance with Chapter 19 (Young Persons) of JSP 375 Vol 1.

34. Commanders, managers or accountable persons **must** make sure that additional control measures, possibly including exclusion from the activity, are put in place where appropriate to minimise the impact on those (protected groups) who are more vulnerable to the effects of manual handling.

Policy Statement 3
The commander, manager or accountable person **must** record and retain the findings of the manual handling risk assessment and communicate the information to those who may be harmed, along with the details of any necessary control measures.

35. The findings of all relevant risk assessments associated with manual handling **must** be recorded and communicated to everyone who might be exposed to the manual handling hazard; those who will receive manual handling training; and those that are required to implement or follow any control measures that have been identified or developed to minimise the risks.

36. MHRAs **must** be carried out if any the criteria set out in Policy Statement 1 are met. The type of MHRA depends on the manual handling activity taking place, the following **should** apply:

a. MOD Form 5012 **should** be completed if the manual handling activity is:

(1) a single person lift;

(2) a single person carry; or

(3) a team activity (also known as a multi-person activity).

b. The MOD Form 5012A **should** be used if the manual handling activity is a pushing or pulling activity.

37. The commander, manager or accountable person (or the competent person undertaking the MHRA on their behalf) **must** complete the MHRA in accordance with any training they may have received on it. If completing the MOD Form 5012 / 5012A, they **should** refer to the associated guidance notes at Annex D.

38. When manual handling has been identified as a workplace hazard, it **must** be included as a part of any formal workplace inspection.

39. When communicating the details of the MHRA to personnel, the commander, manager or accountable person **must** make sure that all relevant personnel comply with any control measures, safe systems of work, training, local policy and so on provided by management for manual handling activities and they are aware that are to report any deficiencies to their commander or manager.

40. MHRAs and associated documents **must** be retained for audit and investigation purposes and **should** be held locally within the specific unit or establishment. When a MHRA or document has been replaced or is no longer valid, it can either continue to be held locally or sent to archive (see JSP 441) and **should** be stored for at least three years. There are some exceptions (for example, health surveillance and health records) which have to be stored for longer. Timescales are set out in Chapter 39 (Retention of Records) of JSP 375 Volume 1.

Policy Statement 4
The commander, manager or accountable person **must** make sure that all risk assessments are reviewed at a frequency that is proportionate to the level of risk.

41. The commander, manager or accountable person **must** make sure that all relevant risk assessments and hazards associated with the manual handling activity are reviewed at a frequency that is proportionate to the level of risk. The manual handling activities **must** be monitored and reviewed to make sure that the control measures are still valid and are being adhered to and to decide if any further control measures will be necessary.

42. It is not possible to foresee all hazards, therefore the commander, manager or accountable person **must** review the risk assessment immediately before an activity starts to make sure it is still valid and that the control measures are still in place. Once an activity has started, commanders and managers **must** 'dynamically' risk manage it and where there is a change to either the Task, Individual, Load or Environment (TILE) then a dynamic risk assessment **must** be carried out.

43. The commander, manager or accountable person **must** make sure that any MHRA is reviewed regularly, at intervals that are appropriate to the risk level. The following **should** be used as a guide:

a. High risk: 6 – 9 months

b. Medium risk: 1 year

c. Low risk: 2 years

44. The commander, manager or accountable person **must** also review the risk assessment if any of the following applies:

a. The line manager for the activity (who has signed the assessment) has changed;

b. When there has been a significant change in the task, procedure, or technology;

c. The individuals involved have changed (if not a generic assessment);

d. The load has changed (weight, hand holds and so on);

e. The environment has changed (lighting, floor condition, actual location and so on);

f. If there has been an accident, incident or near miss involving the manual handling activity; or

g. If there is any other reason for the commander, manager or accountable person to suspect the risk assessment is no longer valid.

Policy Statement 5
The commander, manager or accountable person **must** make sure that personnel are suitably trained to conduct manual handling activities, including the use of manual handling aids, and are adequately supervised.

45. If it is not possible or reasonable to automate or mechanise the handling of a load and manual handling activities are required, then personnel **must** be provided with the necessary training and instruction on how to undertake the manual handling activity safely. Further guidance is provided on Correct Lifting Techniques in Annex C of this chapter.

46. The commander, manager or accountable person **must** make sure that all personnel who undertake manual handling activities as a regular part of their role are formally trained by a trained manual handling instructor and refresher training takes place at least annually either through the DLE course 'Manual Handling Awareness (NEW)' or in-person.

47. Where manual handling activities are a regular part of a person's role, but it is low risk / low impact, then the DLE course 'Manual Handling Awareness (NEW)' may suffice depending on any local risk assessments or as defined within individual Defence organisation Safety Management Systems.

48. If personnel are required to take part in a one-off, high-impact, manual handling activity, for example an office move, they **must** receive in-person training from a trained manual handling instructor.

49. The commander, manager or accountable person **must** make sure, when manual handling aids (pallet trucks, sheet / trolley tables, lifting hooks and so on) are available for use in the workplace, that affected personnel are suitably trained in their use.

50. The commander, manager or accountable person **must** make sure that personnel who require manual handling training, undertake that training at least annually to maintain currency in the subject and that records of training are retained.

51. The commander, manager or accountable person **must** make sure that formally risk assessed manual handling activities (for example those recorded on a MOD Form 5012) are adequately supervised, to make sure control measures and safe systems of work are being followed.

52. Adequate information, instruction and training **must** be given in order to undertake the task safely. The type of training could comprise of a combination of the following:

a. The 'Manual Handling Awareness' course (Defence Learning Environment);

b. A video;

c. Manual handling courses run internally and / or externally;

d. On the job training;

e. Task specific training; and

f. Refresher training, this **should** be considered when risk assessments are reviewed.

53. A video **must** not be used as a substitute for practical instruction but can be used as part of the training package. The correct lifting techniques are illustrated in Annex C.

54. Where personnel are expected to carry out manual handling activities, they **must** undertake the necessary training (for example to familiarise themselves with lifting techniques) and any specialised training where they are expected to operate manual handling aids, and they **must** maintain the currency of any of the required manual handling training.

Part 2: Guidance

This part provides the guidance and good practice that **should** be followed to help you comply with this policy.

Identifying hazards

Policy Statement 1
The commander, manager or accountable person **must** make sure that a suitable and sufficient manual handling risk assessment is undertaken for manual handling activities under their area of responsibility. The risk assessment **must** identify the associated hazards and who may be at risk.

1. A commander, manager or accountable person may have the relevant competence to carry out the manual handling risk assessment (MHRA) for the activities under the area of their responsibility, however, they may decide to delegate this responsibility to a competent person. Where the commander, manager or accountable person has delegated the responsibility for carrying out a MHRA they remain accountable for it and **must** sign it off as the Authorising Officer.

2. Where the commander, manager or accountable person has the relevant competence and has undertaken the MHRA, then the Authorising Officer **should** be the person who is the next level up in their chain of command. The Authorising Officer **must** not be the same person as the assessor of that MHRA.

3. Any risk assessment for manual handling **should** consider activities and processes, the environment, the individual and the load as well as the interfaces and accumulative effects of their component parts. Therefore, one of the first assessment activities is to:

   a. Fully identify the task;

   b. Identify who may be carrying out the task;

   c. Identify the load;

   d. Identify the environment in which the task is to be carried out; and

   e. Identify any other factors relevant to task for example wearing personal protective equipment (PPE).

4. New assessments **should** be carried out using this guidance (which requires minimal training) and be conducted by ‘competent’ persons who have a working knowledge of the processes and activities to be assessed.

5. For activities or processes that contain a repetitive element, consideration **should** also be given to the potential for ‘work-related musculoskeletal disorders’ (sore or inflamed joints (mainly wrists and fingers), tendon damage, and so on).

6. Guidelines for lifting weights are illustrated in Annex B of this chapter and **should** help commanders, managers, or accountable persons to identify high and low risk tasks. The weights illustrated in Annex B are not specific weight limits, they are **guidelines only** and are **not 'safe limits'** for lifting and carrying. They are based on broad assumptions or generalisations provided by the Health and Safety Executive (HSE) where, if met, the risk of injury is considered to be low. However, working outside these limits is likely to increase the risk of injury, which can lead to ill health. The guidelines are derived from HSE lifting capacity data which show differences between men and women in the population and **not individuals** which can be quite different. The weights suggested **must** be reduced if the operation is repeated more often.

7. The assessment **should** consider all circumstances in which the task may be undertaken, therefore assessors **should** have a working knowledge of these processes and activities in order to complete a 'suitable and sufficient' risk assessment.

6. Some manual handling activities can be conducted as a multi-person task which may make possible operations that would be beyond the capability of one person or reduce the risk of injury to a single person. It can be an effective way of handling large items that need to be carried over relatively short distances. However, it may introduce additional problems which **should** be considered in the risk assessment. All team members need to know their own roles within the team and planning and coordination become more important as the team size grows. If a multi-person manual handling activity is to take place, an MHRA **should** be conducted, but depending on the task, individuals involved, load and environment, it may not be required.

7. If the manual handling operation is to be conducted as a multi-person task, the value of the load is not simply divided by the number of people involved. Teams of more than four members are unlikely to work successfully unless managed very carefully. During the handling operation the proportion of the load that is supported by each member of the team will inevitably vary to some extent. This is likely to be more pronounced on steps, sloping or uneven ground where the person(s) at the lower end may find themselves supporting most of the weight.

8. The capability of the weakest person acts as a limiting factor, especially for two-person teams. This means that the load a team can handle safely can be less than the sum of the loads that the individual team members could cope with when working alone. As an approximate guide, using 85% of the total of individual capabilities will allow a safety margin and can be applied to teams of different sizes. An example of how this would work in practice is detailed in the table at Figure 1.

Each Person's Individual Capacity	**Team of 2**	**Team of 3**	**Team of 4**
25kg	(85% of 50kg) 42.5kg	(85% of 75kg) 63.75kg	(85% of 100kg) 85kg

Figure 1. Guide showing example 85% of the total of individual capabilities.

9. The HSE Manual Handling Assessment Charts (MAC) tool is designed to help assess the most common risk factors in lifting (and lowering), carrying and team handling activities. It was developed to identify the high-risk manual handling factors that may need to be modified in order to control these risks. Commanders, managers, and accountable persons **should** use the MAC tool for further assistance with assessing the common risk factors associated with manual handling activities.

10. When using manual handling aids (sack / pallet trolleys and so on) the effort required to move the load can be significantly reduced and the effective load for the purpose of assessment adjusted accordingly. When calculating the effective load several factors need to be taken into consideration: friction, rolling resistance due to the surface over which the load is to be moved, angle of any slope to be negotiated, condition of the mechanical handling aid (bearings, tyres (under inflation), wheel alignment, buckled wheels / axles and so on); and the weight of the mechanical handling aid itself. If a push / pull activity is to take place, a MHRA **should** be conducted, but depending on the task, individuals involved, load and environment, it may not be required.

11. Pushing and pulling activities are safest when the floor or ground surfaces are level, clean, dry, and unbroken. It is important to note that more force is required to push a load up a slope because of gravity, therefore if there are slopes, they **should** not be so steep as to make keeping control of the load difficult.

12. The initial push or pull forces used to start an object moving or to change its direction are usually noticeably higher than the forces used to keep the object moving, so always try to avoid frequent starting, stopping and manoeuvring a load. Guidelines for the safe pushing and pulling of a load are shown in Figure 2, however it is important to remember that these weights are guidelines only (not including any allowance for example; a trolley, sack truck and so on), they are not 'safe limits' and the difference in the weights for men and women are based on the general population and not on individuals, which can be quite different.

	Men	**Women**
Guideline figure for stopping or starting a load	20 kg (or about 200 newtons)	15 kg (or about 150 newtons)
Guideline figure for keeping the load in motion	10 kg (or about 100 newtons)	7 kg (or about 70 newtons)

Figure 2. Guidelines for safe pushing and pulling (HSE Guidance)

13. The HSE Risk Assessment of Pushing and Pulling (RAPP) tool is designed to help assess the key risks in manual pushing and pulling activities involving whole-body effort, for example moving loaded trolleys or roll cages, or dragging, hauling, sliding or rolling loads. Commanders, managers, and accountable persons **should** use the RAPP tool for further assistance with assessing the key risks associated with pushing and pulling activities.

14. The commander, manager or accountable person **should** assess the individual capability of the personnel under their area of responsibility and decide whether the task they are being expected to do is reasonable, for example will the task:

a. Stretch the individual's physical capabilities to the point of risking injury? Individuals' physical capabilities may vary significantly due to a number of factors, for example their physical condition (strength, fitness, and health);

b. Pose a risk due to the employee's present state of health for example expectant mothers, or those undergoing treatment for a medical condition. Allowances **should** be made where the commander, manager or accountable person has been made aware of any present state of health that may pose a hazard to the individual or affect the individual's physical capability to undertake manual handling tasks;

c. Restrict the manual handling capability of an individual due to a previous history of a back, knee, hip condition, hernia or any other history of problems that may affect their ability to conduct the manual handling task; and

d. Require additional knowledge or training for the task to be carried out safely? The risk of injury will be increased where a worker does not have the information or training necessary to perform the task safely. Training **should** cover:

(1) How to recognise the risk in manual handling;

(2) Appropriate Systems of Work;

(3) Use of mechanical aids; and

(4) Good handling techniques.

15. If in doubt on any of the previous points in the last paragraph, an MHRA **should** be completed.

16. If it is determined that an MHRA is not required when conducting the manual handling activity, it **should** be made clear on any general risk assessment that no MOD Form 5012 / 5012A exists for it.

Managing manual handling risks

Policy Statement 2
The commander, manager or accountable person **must** make sure that manual handling is appropriately managed as a workplace hazard and, where applicable, suitable and sufficient control measures are in place, are followed, and reduce the risks to ALARP and tolerable.

17. If a load has to be moved, the use of mechanical aids to eliminate the need for manual handling altogether **should** take primacy; if this option is not reasonably practicable then a review of the task **should** be undertaken to minimise the need for manual handling (for example reducing distance carried from point of delivery to end user).

18. The commander, manager or accountable person **should** make sure that:

a. Work instructions specify the control measures to be used;

b. Control measures are assessed and adjusted to prevent new risks being introduced and are adequately controlled so that the overall risk is minimised;

c. Notices and warning signs are clearly displayed.

19. Age **should** be taken into consideration when assessing an individual's ability to undertake manual handling activities, for example when lifting operations are to be conducted by young people (see Chapter 19 - Young persons of JSP 375 Vol 1). Young persons (16-18) **should** be considered a significant risk and special consideration **should** be given towards that group.

20. It is important to note that an individual's physical capability varies with age for example individuals generally peak in their mid-20s, and then gradually declining, which becomes more significant from the age of 50. Therefore in summary, the risk of injury from manual handling activities may be higher for personnel in their teens or those over the age of 50, further guidance on age considerations can be found in the Manual Handling Operations Regulations 1992 (as amended) (MHOR).

21. For new and expectant mothers (see Chapter 20 - New and expectant mothers of JSP 375 Vol 1), extra care **should** be taken when undertaking manual handling activities because it is possible to cause musculoskeletal damage to soft and developing bones / muscles of the individual and the unborn child. Depending on the individual, it may be best to prevent a new or expectant mother undertaking any manual handling activities, and they have received medical advice to confirm this, if this is the case, they **must** inform their commander, manager or accountable person.

22. MHRAs **should** be carried out taking into account gender, age, and health and so on. However, there is no need to assess every individual, and it is acceptable to do a generic assessment that is common to a group of personnel and / or for similar operations. The main point is to identify the risk of injury and highlight how to make practical improvements.

23. All personnel **should** familiarise themselves with manual handling activities that they are expected to carry out, including the correct lifting techniques, they **should** also familiarise themselves with any manual handling aids that they may be required to operate.

24. In some instances, there will be resource or other implications (for example contractual), which prevent the immediate implementation of control measures. Therefore, the short-term, medium-term, and long-term measures **should** be stated:

a. Short-term measures may comprise stopping the activity, a briefing in safe lifting techniques, a removal of obstructions;

b. Medium-term measures could be the provision of mechanical handling aids; and

c. Longer-term could be the relocation of the storage area due to a unit move or rebuild.

Recording, communicating and reviewing manual handling risks

Policy Statement 3
The commander, manager or accountable person **must** record and retain the findings of the manual handling risk assessment and communicate the information to those who may be harmed, along with the details of any necessary control measures.

25. The type of MHRA depends on the manual handling activity taking place, the following **should** apply:

a. MOD Form 5012 **should** be completed if the manual handling activity is:

(1) a single person lift;

(2) a single person carry; or

(3) a team activity (also known as a multi-person activity).

b. The MOD Form 5012A **should** be used if the manual handling activity is a pushing or pulling activity.

26. When completing a MOD Form 5012 or 5012A, the commander, manager, or accountable person **should** make sure to consult the guidance at Annex D. If further guidance is required in completing either the MF5012 or MF5012A then the assessor **should** consult their local H&S representative, or if applicable, a local manual handling instructor.

27. If an MHRA (MOD Form 5012 / 5012A) is completed, this **should** be linked to, from a general workplace / activity risk assessment on a MOD Form 5010. Each relevant MOD form **should** reference the other in the appropriate text field.

28. If the manual handling activity requires an MHRA, it is acceptable for the general workplace / work activity risk assessment to reference, link to, or duplicate the measures identified there.

29. Where manual handling activities take place regularly, but do not require an MHRA, (for example frequently replacing printer paper) these **should** be included in a more general workplace / activity risk assessment, with suitable and sufficient control measures included.

30. All personnel **should** familiarise themselves with manual handling risk assessments before taking part in manual handling activities in the workplace, so that they understand the risks involved in the activities that they are expected to carry out.

31. The commander, manager, or accountable person **should** regularly check that formally identified manual handling control measures are in place and being adhered to.

Policy Statement 4
The commander, manager or accountable person **must** make sure that all risk assessments are reviewed at a frequency that is proportionate to the level of risk.

32. An initial review of the MHRA and working practices **should** take place shortly after implementation, in order to check the effectiveness of any new control measures and validation of progress that has been made towards implementation of medium and long-term controls.

33. Each review **should** include the commander's, manager's, or accountable person's assessment of the effectiveness of control measures, and any further controls that may be required.

34. If personnel identify new potential control measures for manual handling activities, the commander, manager or accountable person **should** consider these and amend any relevant risk assessment as required.

Manual handling training

Policy Statement 5
The commander, manager or accountable person **must** make sure that personnel are suitably trained to conduct manual handling activities, including the use of manual handling aids, and are adequately supervised.

35. If manual handling activities take place regularly, then commanders, managers or accountable persons **should** make sure that personnel within their area of responsibility are up to date with suitable manual handling training.

36. If personnel have identified a requirement to be trained as a manual handling instructor, then commanders, managers or accountable persons **should** make sure that they have suitable time in work allocated to them to conduct such training.

37. The commander, manager or accountable person **should** make sure that any training needed to carry out the task has been completed and recorded.

Retention of records

38. All records relating to manual handling including Risk Assessments **must** be kept in accordance with Chapter 39 of JSP 375 Volume 1 (Retention of records).

Related documents

39. The following documents **should** be consulted in conjunction with this chapter:

a. JSP 375 Volume1:

(1) Chapter 2 - Military and Civilian Workplace Safety;

(2) Chapter 8 - Safety Risk Assessment and Safe Systems of Work;

(3) Chapter 14 - Health Surveillance and Health Monitoring;

(4) Chapter 16 - Safety Occurrence Reporting and Investigation;

(5) Chapter 19 - Young Persons;

(6) Chapter 20 - New and Expectant Mothers at Work;

(7) Chapter 22 - Work Equipment; and

(8) Chapter 39 - Retention of Records.

b. Other MOD Publications:

(1) JSP 975 - MOD Lifting Policy

c. Legislation and Guidance:

(1) Manual Handling Operations Regulations 1992 (as amended)

(2) Merchant Shipping and Fishing Vessels (Manual Handling Operations) Regulations

(3) HSE INDG 143 - Manual handling at work, a brief guide

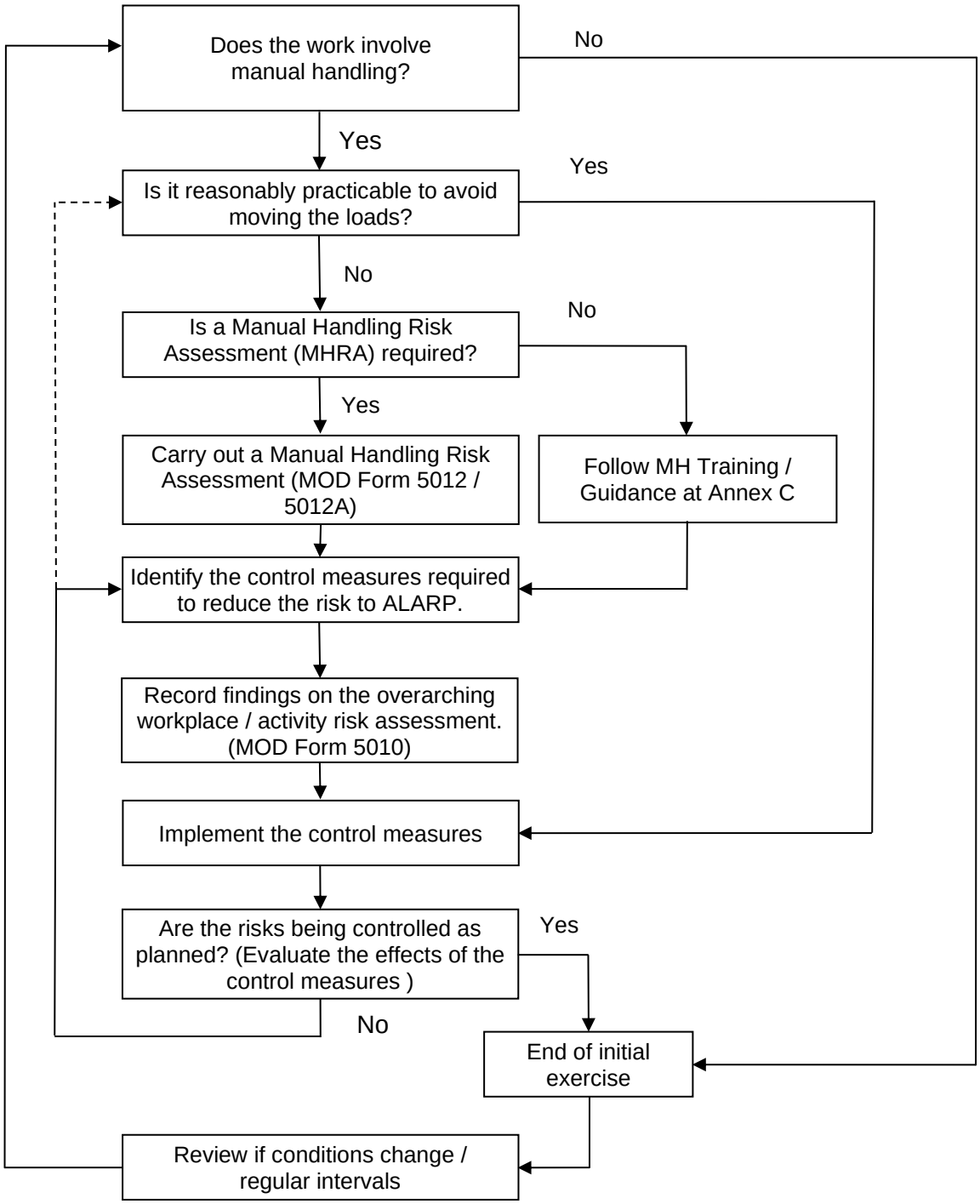
(4) HSE INDG 383 - Manual handling assessment charts (the MAC tool)

(5) HSE INDG 478 – Risk assessment of pushing and pulling (RAPP) tool

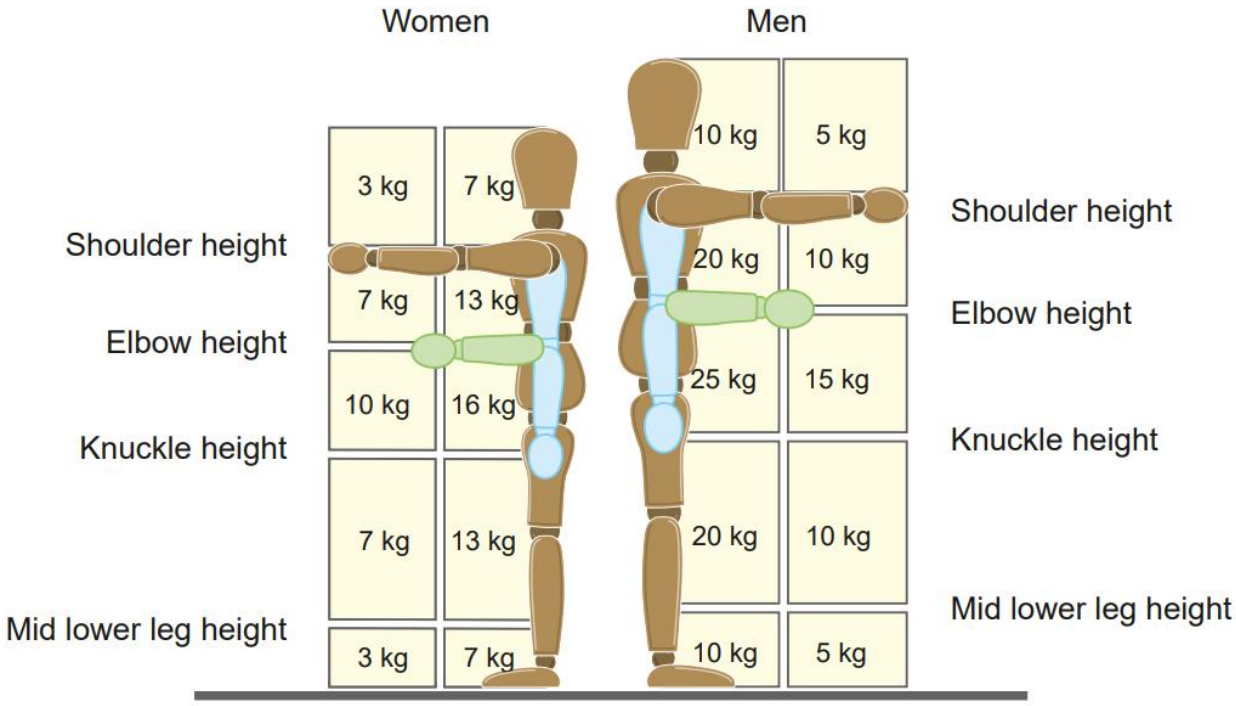
(6) HSE L23 - Guidance on MHOR Regulations;

(7) HSG60 – Upper limb disorders in the workplace;

Manual Handling Risk Assessment – Flowchart



Guidance Weights



The above diagram comes from the Health and Safety Executive Industry Guidance Note 143: Manual handling at work – A brief guide.

Note: The guideline weights shown are for guidance only and assumes the pace of work is not forced, there are adequate time to rest, and the load is not held for any prolonged period of time. The weights suggested **must** be reduced if the operation is repeated more often.

Correct Lifting Techniques

Plan Lift

1. Make sure that you are wearing suitable footwear and appropriate clothing for lifting.
2. Consider desitination.
3. Examine Load - Is help required with the load?
4. Can it be reduced in size?
5. Make sure area is free from clutter.

Place the Feet

1. Approximately shoulder width apart.
2. Face the direction intended.
3. Leading leg forward.
4. Heaviest part of the load towards you.

Adopt good posture

1. Slight bending of the back, hips and knees.

Get a firm grip

1. Keep arms within boundary formed by legs.
2. Make sure that the load is not just on the fingers.
3. Elbows close to sides.

Move the Load

1. Lift load to waist height.
2. Move slowly to avoid jerky movements.
3. Keep close to load.
4. Maintain your vision.

Lower Load

1. Lower load slowly, making sure back is straight and knees bent.
2. Avoid crushing fingers when lowering load.
3. Put down, then adjust into desired position.

Evaluate the Task

Does the task involve:

a. Holding loads at a distance from the body? This increases general stress on the lower back;

b. Twisting of the trunk? Stress on the lower back is increased significantly if such postures are adopted, even worse is to twist whilst supporting a load;

c. Stooping? This increases stress on lower back, either by bending or leaning forward with the back straight (to be avoided where possible);

d. Lifting above waist height or lowering below mid-thigh? Excessive reaching upwards and downwards places additional strain on arms and back, making control of the load to become more difficult and because arms are extended, they are more prone to injury. Lifts beginning at floor level **should** be avoided where possible and **should** finish no higher than waist height;

e. Moving a load over excessive distances? Long distances are more demanding than shorter ones. Moreover, it is more likely to necessitate a change of grip part way, further increasing the risk of injury;

f. Excessive pushing or pulling of the load? The risk of injury is increased if pulling or pulling is carried out with the hands much below waist height or above shoulder height;

g. Repetitive handling? A small load handled very frequently can create as much of a risk of injury as a one-off handling of a more substantial load. The effect will be worsened by jerky, hurried movements which can multiply the stress placed on the body; and

h. Frequent or prolonged physical effort resulting in insufficient rest or recovery periods? If physical stresses are prolonged during physically demanding work, then fatigue will occur, and this increases the risk of injury. Consider rest breaks from tasks to allow recovery for example changing to another task, which uses a different set of muscles.

Consider the Individual

Think about the person(s) carrying out the manual handling activity:

a. Are they pregnant? If so, they may be limited to light manual handling or possibly instructed to undertake no manual handling.

b. Does the individual have any health concerns? They may have a short-term injury or a long-term health condition or disability that limits their physical capability.

c. Does the manual handling activity require a person above or below a certain height? If carrying out manual handling in small, possibly cramped conditions, it might mean that persons over a certain height would unduly add risk to the activity. Conversely, if the item is particularly large, a shorter worker may have trouble seeing over the load.

d. Has the individual been trained? Manual handling might not be a usual part of the individual's role, so they might not have specific training. A 'toolbox talk' and demonstration may be enough.

Assess the Load

Evaluate the load and consider whether the load is:

a. Heavy? Consideration **must** be given to reducing the load and / or obtaining mechanical assistance. If this is not possible, then handling by two or more people may make possible an operation that is beyond the capability of one person, thus reducing the risk of injury to a solo operator. However, the load that a team can handle in safety is less than the sum of loads that individual team members could cope with when working alone. One person **should** plan and take charge of the operation ensuring that the movements are coordinated. Team members **should** preferably be of broadly similar build and physical capability;

b. Bulky / unwieldy? The shape of the load will affect the way that it can be held and can often make it harder to get a good grip:

(1) If handlers have to lean away from a load to keep it off the ground they will be forced into unsuitable postures;

(2) The bulk of the load can also interfere with vision, thus increasing the risk of slipping, tripping, falling, or colliding with obstructions; and

(3) If the centre of gravity of the load is not be central (or variable, such as a liquid) within the load, the risk of injury is increased.

c. Difficult to grasp? If the load is difficult to grasp because it is rounded, smooth, slippery, and so on, its handling will call for extra grip strength which is tiring and will involve inadvertent changes of posture. There will also be a greater risk of dropping the load;

d. Unstable or contents likely to shift? If load is unstable because it lacks rigidity, the likelihood of injury is increased. The instability may impose sudden stresses for which the handler is not prepared; and

e. Intrinsically harmful (for example sharp / hot)? Risk of injury can arise from the external state of a load. Such characteristics may also impair grip, discourage good posture, or otherwise interfere with safe handling.

Check the Environment

Evaluate the working environment and consider:

a. Space constraints preventing good posture - if the working environment hinders working at a safe height or prevents good posture for example working in or moving through a narrow gap, the risk of injury from manual handling will be increased;

b. Uneven, slippery, or unstable floors - in addition to increasing the likelihood of slips, trips, and falls, uneven or slippery floors hinder smooth movement creating additional risk;

c. Variations in level of floors or work surfaces - the presence of steps, or slopes can increase the risk of injury;

d. Hot / cold conditions - high temperatures, high humidity or cold can cause rapid fatigue. Inappropriate gloves and other protective clothing, which may be required, can also hinder movement, impair dexterity, and reduce grip;

e. Strong air movements - sudden air movements caused by a ventilation system or a strong wind can make large loads more difficult to manage safely;

f. Poor lighting conditions - dimness or glare may cause poor posture; Contrast between areas of bright light and deep shadow can aggravate tripping hazards and hinder the accurate judgment of height and distance; and

g. Moving floor or platform - when manual handling is being done loading or unloading a truck, in the back of an aircraft or onboard a ship and the ‘ground’ itself is moving. In these circumstances, specific risk assessments, specialist lifting equipment and even statute may apply in addition.

Other factors to consider may include:

a. Clothing, footwear, or PPE. Clothing, footwear, and PPE **must** be adequate for the task being undertaken and allow free movement and posture for the manual handling process being undertaken; and

b. Goods deliveries and dispatch. Commanders and managers **should** be aware of times, sizes of loads and so on. The risk assessment **should** take into consideration events which may occur outside of the normal parameters (for example inappropriate delivery vehicles, damaged packaging and so on).

MOD Form 5012 & 5012A Guidance Notes

1. These guidance notes are for the more technical aspects of completing the MOD Forms 5012 and 5012A, and as such will not go through the more 'administrative' parts of either form (Part 1 or Part 4). However, if conducting a 'Person Specific' risk assessment, the identified person(s) **should** be named, or at least their role identified in the task description.

2. In addition to the above paragraph, where there is a duplication of methodology (working out the activity and overall risk on both the 5012 / 5012A, inputting control measures or explaining the load weight / frequency graph) this will only be detailed in the Single Lift section of these guidance notes to prevent repetition.

3. The MOD Form 5012 is to be used for:

   a. Single lift;

   b. Single carry; and

   c. Team activities.

4. The MOD Form 5012A is to be used for manual handling activities where the user will be pushing or pulling:

   a. Loads on wheels; and

   b. Loads without wheels.

5. Both forms were developed to utilise industry guidance from the Health and Safety Executive, INDG383 – Manual handling assessment charts (the MAC tool) and INDG478 – Risk assessment of pushing and pulling (RAPP) tool.

6. Completed examples can be found here:

   a. Single Person Lift and Carry

   b. Team Handling

   c. Push / Pull Without Wheels

7. The person(s) who will be performing the manual handling operation(s) only needs to be made aware of what control measures are in place for them to carry out the activity safely. The work in the forms to ascertain the level of risk **must** be completed by someone competent to do so.

Risk levels

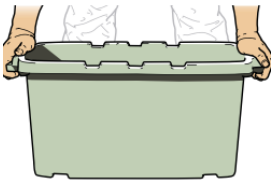
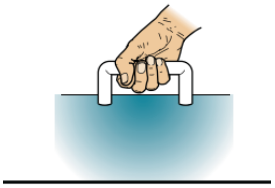
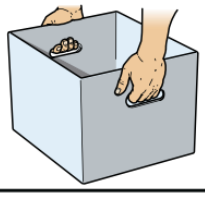
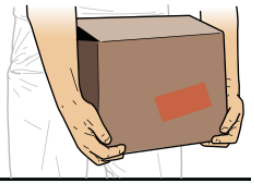
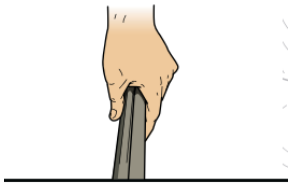
8. All manual handling activities are made up of several factors, each factor carrying with it a specific level of risk to build the overall risk rating of moving the load. When deciding what control measures to implement, consider what risk rating each factor has, that will bring down the overall rating. The following table can help you make the decision on what control measures to implement:

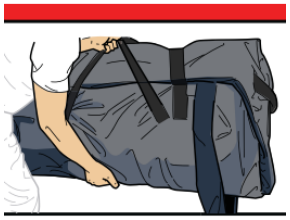
Risk Level	Actions
Low	Although the risk is low, consider the exposure levels for vulnerable groups such as pregnant women, disabled, recently injured, young or inexperienced workers.
Medium	Examine the tasks closely.
High	Prompt action needed. This may expose a significant proportion of personnel to risk of injury.
Very High	Such operations may represent a serious risk of injury and **must** be improved.

Table 1: Risk ratings and actions

MOD Form 5012 – Part 2 – Universal factors

9. This part focusses on the factors that are applicable to single lift, single carry, and team manual handling activities.

Universal Factors 5012	Low	Medium	High
Grip on the load	Good grip  Fit-for-purpose handles/ handholds matched to the size and weight of the load  Cylindrical handles or items the whole hand can wrap round comfortably	Reasonable grip  Handles or handholds too small or lack finger clearance or only the fingers support the load  No handles or handholds but can be held underneath, or has strap or loop handles	Poor grip  No handles or handhold areas  Palm, pinch or fingertip grip or force used to keep items together

<table>
<tr><td></td><td></td><td></td><td> 
Rough, slippery or with pressure points
 
Irregular, bulky or non-rigid</td></tr>
<tr><td>Postural, PPE, or clothing constraints</td><td colspan="3">Factors that force personnel to modify their postures. If their movements are restricted when lifting because of the space available (for example lifting in a narrow aisle or in a crowded or disorganised storage area) or lifting through narrow gaps, the risk level would be medium. If the posture is severely restricted (for example lifting in an area with a low ceiling) the risk rating would be high.

If the person(s) conducting the manual handling activity must wear PPE as a part of other work or must wear bulkier clothing for cold weather, a judgement call should be made by the assessor as to how restrictive it is.</td></tr>
<tr><td rowspan="2">Floor surface</td><td colspan="3">For outdoor work this will depend on the weather. Always assess the ‘worst-case scenario’.</td></tr>
<tr><td>Non-slip, dry, clean, firm, level and undamaged.</td><td>Mostly dry and clean (damp or some debris), OR reasonably firm OR minor damage.</td><td>Slippery (greasy, oily, wet, icy) OR much debris OR soft OR unstable OR severe damage.</td></tr>
<tr><td>Environmental factors</td><td colspan="3">Observe the working environment and score if the handling operation takes place:
in extremes of temperature;
with strong air movements; or
in extreme lighting conditions (dark, bright or poor contrast).
If one of the risk factors is present mark as medium, if two or more of the risk factors are present mark as high.</td></tr>
</table>

Table 2: Universal factors and their explanations

10. The assessor **should** add-up the scores from the universal factors and mark the correct box in the ‘Universal factors risk score’ table.

UNIVERSAL FACTORS RISK SCORE		
Low	**0 – 2**	☐
Medium	**3 – 5**	☐
High	**6 – 8**	☐

11. Note that the heading is coloured yellow, this is relevant for calculating the activity risk score in Part 3A-C.

MOD Form 5012 – Part 3 – Type of Risk Assessment

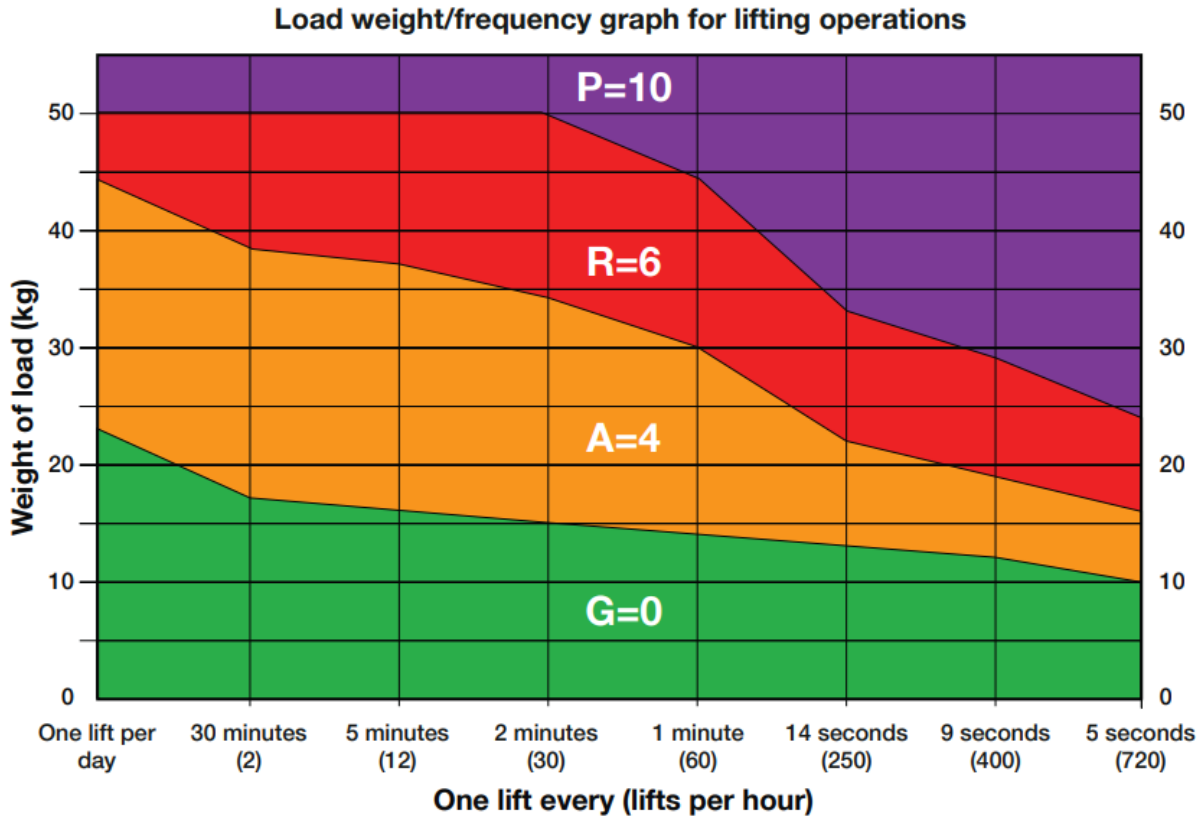
12. Depending on the type of activity, the assessor may need to complete up to 2 of the 3 types of assessment. For example, the task may be to pick up a load from a truck and move it to a storage area, this would encompass lifting and carrying.

13. The assessor **should** tick all the boxes that apply to the activity they are assessing and complete those parts of the MF5012. If the overall activity is to be completed by more than one person, but each instance of manual handling is carried out by individuals, then this is not a team handling operation.

MOD Form 5012 – Part 3A – Single Person Lift

Load weight / frequency graph

14. The load weight / frequency graph is a guide to show the risk associated with the weight and the repetition of lifting. Firstly, the assessor **should** note the weight of the load being lifted, then work out the repetition rate, shown along the bottom of the graph. For example, if you had a load that was 15kg, and there were 30 loads to be lifted in 30 minutes (1 lift every 1 minute), you would see that the risk is in the amber / medium section, as shown below.



15. The assessor **should** then mark the corresponding risk rating box under the load weight / frequency graph. If the graph shows the load weight / frequency as being in the purple / high risk zone, then the assessor **should** examine the task very closely as it may represent a serious risk of injury and **must** be improved.

Single Person Lift Factors

16. The assessor then needs to complete the single person lift factors; in the same way they completed the universal factors in Part 2.

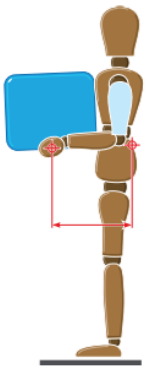
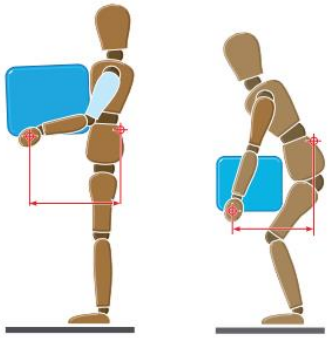
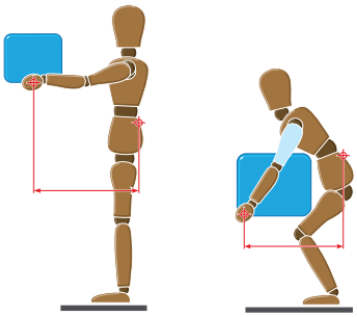
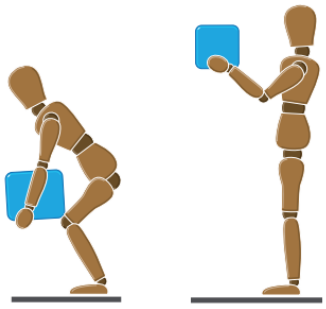
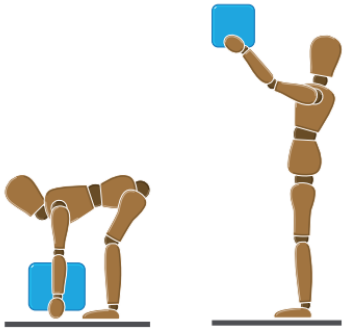
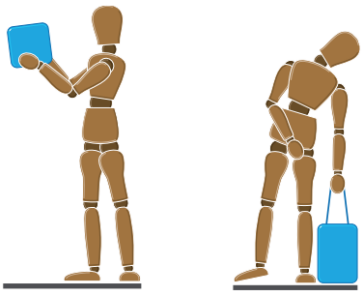
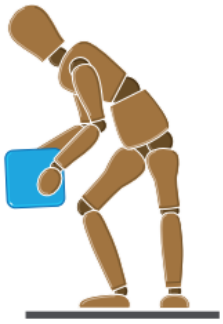
Single Lift Factors	**Low**	**Medium**	**High**
Hand distance from the lower back	Upper arms vertical AND torso upright. 	Upper arms angled away from torso. Torso bent forward. 	Torso upright. Arms fully outstretched. Upper arms angled away from torso AND torso bent forward 
Vertical lift zones	Hands between knee and elbow height. 	Hands between knee and floor level. Hands between elbow and head height. 	Hands at floor level or below. Hands at head height or above. 
Torso twisting and sideways bending	Little or no torso twisting or sideways bending. 	Torso twisted. Torso bent sideways. 	Torso both twisted AND bent sideways, 

Table 3: Single person lift factors and their explanations.

17. The assessor **should** add-up the scores (shown in brackets) from the single lift factors and mark the correct box in the 'Single person lift risk score' table.

SINGLE PERSON LIFT RISK SCORE		
Low	0 – 2	☐
Medium	3 – 7	☐
High	8 – 11	☐

18. The next part of the MF5012 is to determine the overall level of risk. This is done by combining the single lift and universal factors to come up with the activity risk rating.

ACTIVITY RISK RATING			
Single Person Lift Score	ACTIVITY RISK		
High	Medium ☐	High ☐	High ☐
Medium	Low ☐	Medium ☐	High ☐
Low	Low ☐	Low ☐	Medium ☐
Universal Factors	Low	Medium	High

19. In order to get the final, overall risk rating, the activity risk rating **should** be combined with the load weight / frequency score. The overall risk score **should** then be reflected in relevant field of Part 1 – Admin.

OVERALL RISK RATING				
Activity Risk Rating	OVERALL RISK			
High	Medium ☐	High ☐	High ☐	Very High ☐
Medium	Low ☐	Medium ☐	High ☐	Very High ☐
Low	Low ☐	Low ☐	Medium ☐	High ☐
Load Weight / Frequency	Low	Medium	High	Very High

20. Finally, the assessor **must** utilise the hierarchy of control measures to record the actions to be taken to reduce the risk.

MOD Form 5012 – Part 3B – Single Person Carry

21. Please refer to the previous 'Single Person Lift' guidance notes to explain how the 'Load weight / frequency' graph works.

Single Person Carry Factors

22. The assessor **should** then complete the single person carry factors; in the same way they completed the universal factors in Part 2.

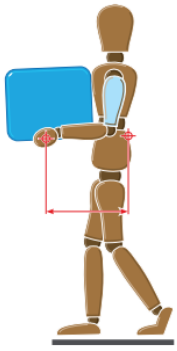
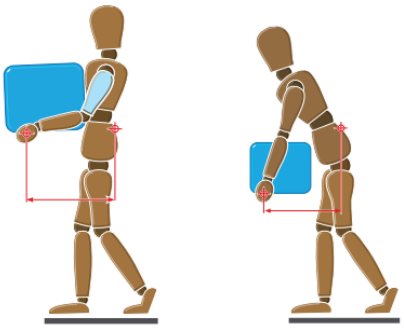
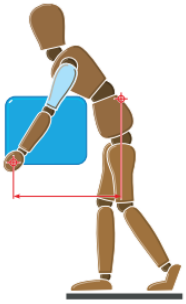
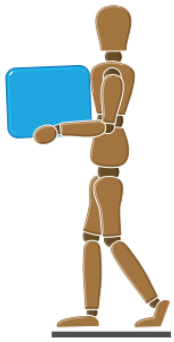
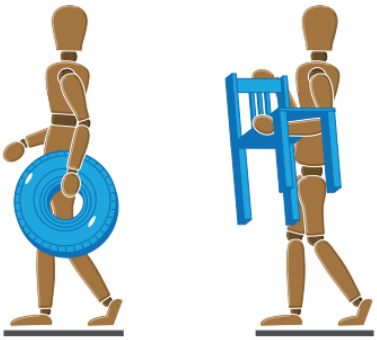
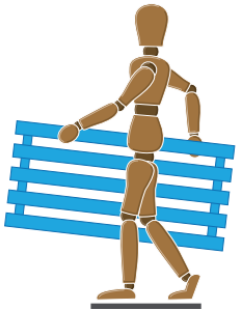
Single Person Carry Factors	**Low**	**Medium**	**High**
Hand distance from the lower back	Upper arms vertical AND torso upright. 	Upper arms angled away from torso. Torso bent forward. 	Upper arms angled away from torso. AND torso bent forward. 
Asymmetrical torso or load	Load AND hands symmetrical in front of the torso. 	Torso symmetrical but load is carried to one side. Load not symmetrical. 	Two handed-carrying to the side. 
Carry Distance	Observe the task and estimate the total distance that the load is carried (not the distance 'as the crow flies').		
Obstacles on route	Count the number of different types of obstacle along the carrying route. If the person has to carry the load up or down a steep slope, up or down steps, through closed doors/narrow doorways or around tripping hazards or round bends and corners, the risk is medium. If the task involves carrying items on a ladder or past two or more obstacles, the risk is high.		

Table 4: Single person carry factors and their explanations.

23. Please refer to the previous 'Single Person Lift' guidance notes and follow the guidance for working out the risk ratings and completing the control measures.

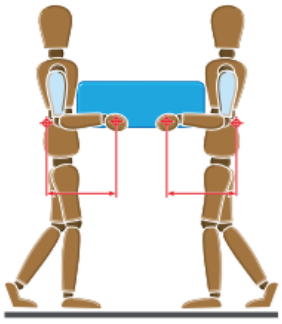
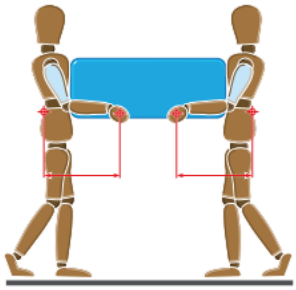
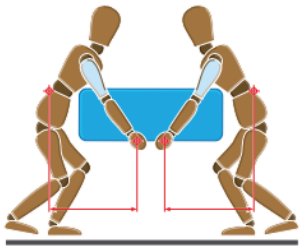
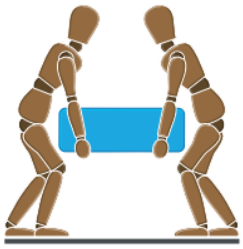
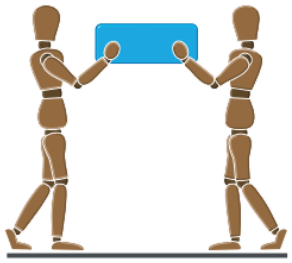
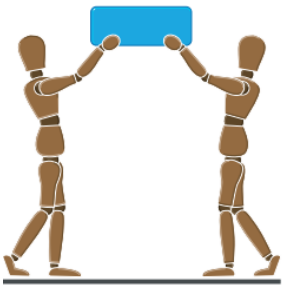
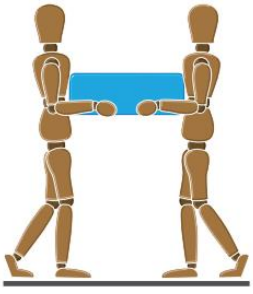
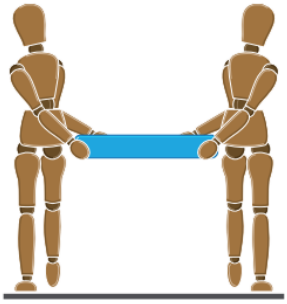
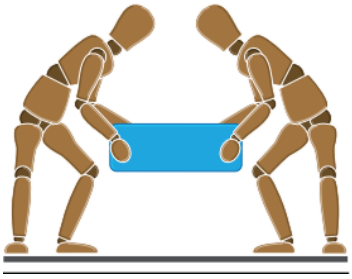
MOD Form 5012 – Part 3C – Team Handling Operation Assessment

24. The load weight part of this form is dependent on how many people will be completing the task. Simply check the box that corresponds to the weight of the load and how many people are moving it.

Note: For regularly planned team handling operations, it is recommended that teams be limited to a maximum of 4, so the form is designed for teams of 2, 3 or 4.

Team Handling Operation Factors

25. The assessor **should** then complete the team handling operation factors; in the same way they completed the universal factors in Part 2.

Team Handling Operation Factors	**Low**	**Medium**	**High**
Hand distance from the lower back	Upper arms vertical AND torso upright. 	Upper arms angled away from torso OR torso bent forward. 	Upper arms angled away from torso AND torso bent forward. 
Vertical lift zones	Hands between knee and elbow height. 	Hands below knee AND / OR above elbow height. 	Hands at floor level or below OR head height and above. 
Torso twisting and sideways bending	Little or no torso twisting or sideways bending. 	Torsos either twisted OR bent sideways. 	Torsos both twisted AND bent sideways. 

Carry Distance	Observe the task and estimate the total distance that the load is carried (not the distance 'as the crow flies').
Obstacles on route	Count the number of different types of obstacle along the carrying route. If the team has to carry the load up or down a steep slope, up or down steps, through closed doors/narrow doorways, around tripping hazards or round bends and corners, the risk score is medium. If the task involves carrying items up ladders or past two or more types of obstacle, the risk score is high.
Communication co-ordination and control	A good team handling operation will be well planned. Communication between the individuals is essential when lifting as part of a team. An example of good communication would be the workers counting 'one, two, three' before they lift. Look to see if the team has control of the load, that it is lifted smoothly, and that all members lift together. An uncoordinated team lift may leave one member of the team bearing the entire weight.

Table 5: Team operation factors and their explanations.

26. Please refer to the previous 'Single Person Lift' guidance notes and follow the guidance for working out the risk ratings and completing the control measures.

MOD Form 5012A – Part 2 – Universal push / pull factors

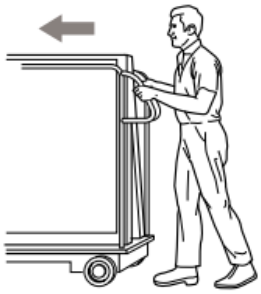
27. These guidance notes are for the more technical aspects of completing the MOD Forms 5012 and 5012A, and as such will not go through the more 'administrative' parts of either form (Part 1 or Part 4).

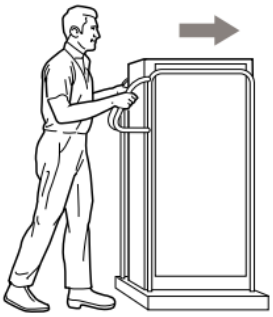
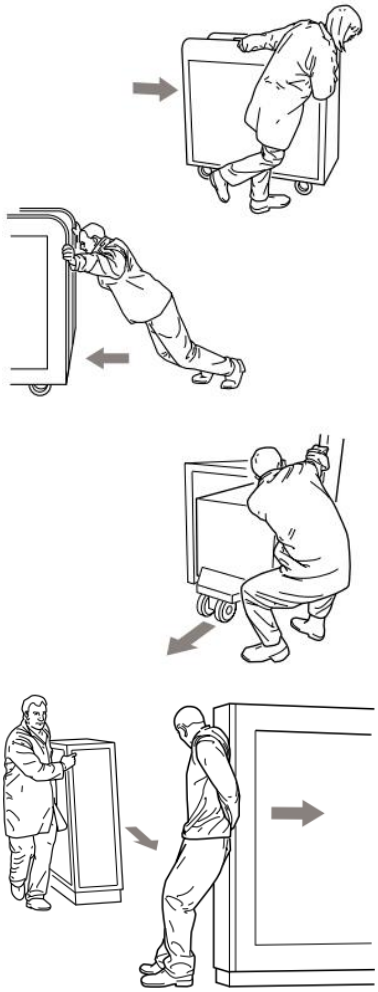
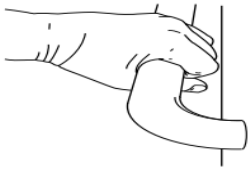
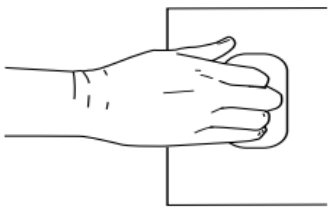
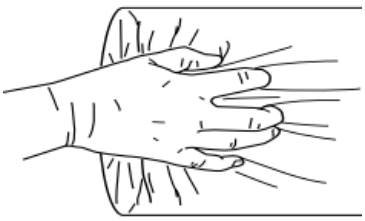
28. In addition to the above paragraph, where there is a duplication of methodology (working out the activity and overall risk on both the 5012 / 5012A and inputting control measures) this will only be detailed in the Single Lift section of these guidance notes to prevent repetition.

29. The person(s) who will be performing the manual handling operation(s) only needs to be made aware of what control measures are in place for them to carry out the activity safely. The work in the forms to ascertain the level of risk **must** be completed by someone competent to do so.

30. Finally, the sections that relate to the factors that are specific to either loads with or without wheels – these are suitably explained within the forms themselves and requires no further explanation or illustration.

31. Part 2 of the MF5012A focusses on the factors that are applicable to all push / pull activities, including either loads with or without wheels.

Universal Push / Pull Factors	**Low**	**Medium**	**High**
Posture	Torso is largely upright, not twisted and hands are between hip and shoulder height. 	Body is inclined in direction of exertion, OR torso is noticeably bent or twisted, OR Hands are below hip height.  	Body is severely inclined, or worker squats, kneels or needs to push with their back against the load, OR torso is severely bent or twisted, OR hands are behind or on one side of body or above shoulder height.

			
Hand grip	There are handles or handhold areas which allow a comfortable power grip for pulling or comfortable full-hand contact for pushing. 	There are handhold areas, but they only allow a partial grip, for example: fingers clamped at 90°, or partial hand contact for pushing. 	There are no handles, or the hand contact is uncomfortable. 
Work pattern	Observe the work, noting whether the operation is repetitive (five or more transfers per minute) and whether the worker sets the pace of work. Ask workers about their pattern of breaks and other opportunities to rest or recover from the work.		
Floor Surface	Floor is dry, clean, level, firm, and in good condition (not damaged or uneven).	Floor is mostly dry and clean (damp or debris in some areas); OR has a sloping (gradient is between 3º and 5º); OR is reasonably firm underfoot (for example, carpet); OR is in poor condition (minor damage).	Floor is contaminated (wet or debris in several areas); OR has a steep slope (gradient is more than 5º); OR is soft / unstable underfoot (gravel, sand, mud); OR is in very poor condition (severe damage).

Obstacles on route	Check the route for obstacles. Note if the equipment is moved over trailing cables, across raised edges, up or down steep ramps (gradient of more than 5°), up or down steps, through closed/narrow doors, screens or confined spaces, around bends and corners or objects. Each type of obstacle **should** only be counted once no matter how many times it occurs.
Other factors	Identify any other factors, for example: • The equipment or load is unstable; • The load is large and obstructs the worker's view of where they are moving; • The equipment or load is sharp, hot or otherwise potentially damaging to touch; • There are poor lighting conditions; • There are extreme hot or cold temperatures or high humidity; • There are gusts of wind or other strong air movements; • Personal protective equipment or clothing makes using the equipment difficult.

Table 6: Universal push / pull factors and their explanations.

32. The assessor **should** add-up the scores from the universal factors and mark the correct box in the 'Universal factors risk score' table.

MOD Form 5012A – Part 3 – Type of RAPP

33. The assessor **should** tick the box that applies to the activity they are assessing and complete those parts of the MF5012A. There are 2 types of push / pull activity: those with wheels, and those without wheels.

MOD Form 5012A – Part 3A – Wheeled equipment

34. The first part of the RAPP for wheeled equipment is the load weight score. The level of risk corresponds to the weight of the combined load and equipment, and the type of equipment used. If the weight of the load exceeds the equipment's rated capacity, then this **must** be reduced before carrying on.

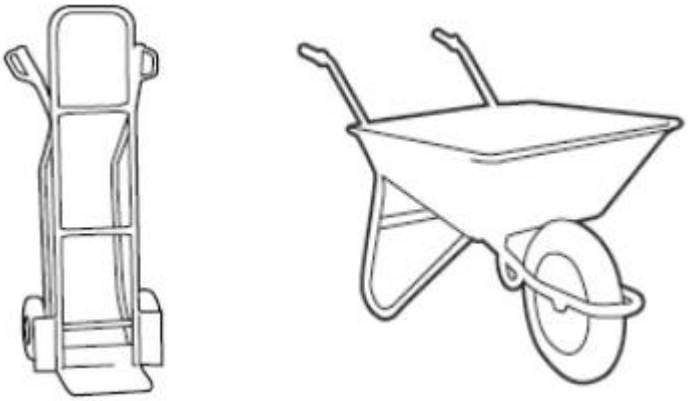
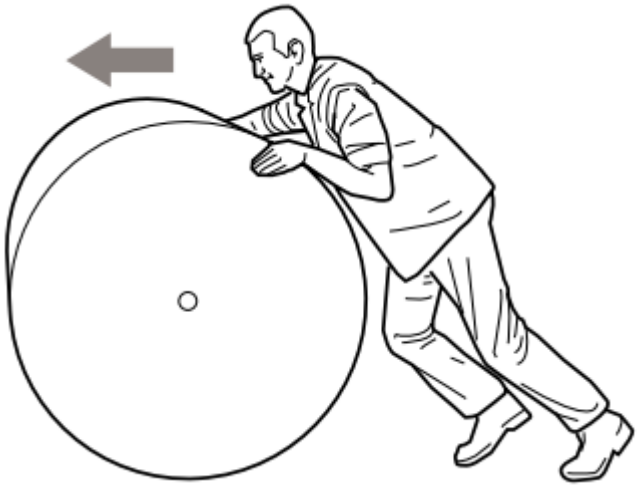
Type of equipment	**Some Examples**	**Illustration**
Small - with 1 or 2 wheels	Wheelbarrows, wheelie bins or sack trucks. With this equipment the person supports some of the load.	
Medium - with 3 or more wheels	Roll cages or Eurobins. Could also be equipment with 3 or more castors.	
Large, steerable or running on rails	Pallet truck or overhead rail system.	

Table 7: Examples of wheeled equipment and illustrations. (Note: These examples are not exhaustive)

MOD Form 5012A – Part 3B – Loads without wheels

35. The first part of the RAPP for loads without wheels is the load weight score. The level of risk corresponds to the weight of the load and how it is to be moved.

Type of movement	**Illustration**
Rolling	
Churning (loads are moved by pivoting / rolling along the base edges)	

Dragging / hauling or sliding	

Table 8: Illustrations showing the different types of pushing / pulling of loads without wheels (Note: These examples are not exhaustive)

36. If further guidance is required in completing either the MF5012 or MF5012A then the assessor **should** consult their local H&S Rep, or if applicable, a local manual handling instructor.