



Australian Government

BSBWHS616 Apply safe design principles to control WHS risks

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with BSB Business Services Training Package Version 5.0.

Application

This unit describes the skills and knowledge required to apply safe design principles to control work health and safety (WHS) risks in a product's life cycle. It involves engaging at different points of the supply chain to provide advice based on safe design principles. The central feature of safe design is the application of relevant information and data about human experience, capabilities and behaviour to the design of objects, facilities, procedures and environments that people use.

The unit applies to those who apply the principles of safe design in their organisation, which may be at one or more stages of the product's life cycle, including procurement, installation, operation and disposal. Products may refer to plant, tools and equipment. The application of safe design principles aims to eliminate or minimise hazards and their associated risks before an existing product, or a product being developed or modified, is introduced into the workplace.

NOTES

1. The terms 'occupational health and safety' (OHS) and 'work health and safety' (WHS) are equivalent, and generally either can be used in the workplace. In jurisdictions where *model WHS laws* have not been implemented, registered training organisations (RTOs) are advised to contextualise this unit of competency by referring to existing WHS legislative requirements.
2. For the purposes of this unit of competency 'safe design' refers to a process defined as the integration of hazard identification and risk assessment methods to eliminate or minimise the risk of injury throughout the life cycle of plant, tool or equipment being designed.
3. For the purposes of this unit of competency a 'product' refers to any plant, tool or equipment.
4. The *model WHS laws* include the model WHS Act, model WHS Regulations and model WHS Codes of Practice. See Safe Work Australia for further information.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Regulation, Licensing and Risk – Work Health and Safety

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Advise on WHS principles that support safe design	1.1 Advise decision-makers of their duties under WHS laws to manage WHS risks throughout a product's life cycle 1.2 Source and make available to decision-makers the most current information and data on WHS principles, materials, technology and systems that apply to product design 1.3 Advise on methods and tools that can support WHS hazard identification and WHS risk assessment throughout a product's life cycle 1.4 Identify and address learning and development needs of decision-makers to manage WHS risks that may arise during a product's life cycle, including during its design phase 1.5 Advise on consultation with known and/or potential users of the product during the design phase, according to organisational policies and procedures 1.6 Identify situations where specialist and other advisers may be required to support safe design activities
2 Advise on systematic approach to WHS risk management for safe design	2.1 Advise on selection and implementation of required WHS risk controls in design, based on the hierarchy of control measures 2.2 Advise on documentation requirements relating to decision-making during risk assessment process 2.3 Advise on establishment of a residual WHS risk register and distribution of this information to those involved in downstream or subsequent product life-cycle stages 2.4 Advise on monitoring the design as it evolves, to identify and manage potential WHS hazards that may arise during product life cycle and their associated risks 2.5 Identify and address learning and development needs of decision-makers in relation to managing design-related WHS risks in a product's life cycle
3 Advise on consultation	3.1 Support decision-makers in considering the needs of those

ELEMENT	PERFORMANCE CRITERIA
processes in product's life cycle	using or interacting with product throughout its life cycle 3.2 Facilitate involvement of technical experts as required according to organisational processes and procedures 3.3 Advise on consultation arrangements with required personnel during all phases of design process to identify WHS hazards and control WHS risks that may occur throughout a product's life cycle 3.4 Advise on communicating residual WHS risks in product to those who will use or interact with the product throughout its life cycle
4 Advise on procurement systems to minimise 'purchased' WHS hazards and their associated risks	4.1 Advise decision-makers involved in purchasing and contractual arrangements to include requirements to identify WHS hazards and control WHS risks, and to provide information and data on residual WHS risks as part of procurement process 4.2 Advise on including a requirement to carry out a safe design approach in the design brief or draft specifications

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	Identifies, interprets and analyses legislative and organisational texts relevant to safe design
Writing	Develops advice and recommendations about safe design, matching style of writing to purpose and audience
Oral communication	- Presents information and advice using language appropriate to audience - Uses questioning and active listening to seek information and confirm understanding
Numeracy	Selects from and applies a range of mathematical strategies to interpret

Skill	Description
	and analyse mathematical information embedded in a range of texts • Applies mathematical processes to assess risk levels • Uses oral and written mathematical language and representation to communicate advice on WHS risk management in safe product design
Navigate the world of work	• Applies legal responsibilities to WHS product design compliance contexts • Keeps up to date on changes to WHS laws relevant to own role and responsibilities, and considers their implications when advising on compliance in relation to product design
Interact with others	• Actively identifies requirements of communication exchanges, selecting appropriate channels, format, tone and content to suit purpose and audience • Monitors impact of communication exchanges when providing advice that relates to safe design • Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective group interaction, influencing direction and taking a leadership role
Get the work done	• Uses logical planning processes and understanding of context to organise training and identify specialist needs • Uses systematic and analytical processes in complex, non-routine situations: sets goals, gathers relevant information, identifies and evaluates options against agreed criteria, and seeks input and advice from others before taking necessary action • Identifies the potential of new

Skill	Description
	approaches to product life-cycle risk management to enhance safe design work practices and outcomes • Uses digital systems and tools to access, record, organise, analyse, display and share information

Unit Mapping Information

Supersedes and is equivalent to BSBWHS609 Advise on the application of safe design principles to control WHS risks.

Links

Companion Volume Implementation Guides are available from VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=11ef6853-ceed-4ba7-9d87-4da407e23c10>

Assessment Requirements for BSBWHS616 Apply safe design principles to control WHS risks

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, and to:

- apply safe design principles to control work health and safety (WHS) risks that may occur throughout the life cycle of at least two different products.

During the above, the candidate must:

- provide advice based on WHS legislative requirements and safe design principles in relation to:
 - developing a systematic WHS risk-management approach to safe design
 - consultation processes relating to safe design in a product's life cycle
 - procurement systems to minimise 'purchased' WHS hazards and their associated risks.
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Knowledge Evidence

The candidate must demonstrate the knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit. This includes knowledge of:

- commonwealth and state/territory WHS laws, publications and guidelines relating to consultation, participation and safe design, including:
 - Safe Work Australia codes of practice and guidance information that relate to safe design
 - requirements for managing WHS risks and implementing controls at each life-cycle stage of a product
 - requirements relating to consultation processes
 - legislative duties of persons conducting a business or undertaking (PCBUs) or officers who are designers or are responsible for safe design processes
- factors involved in selecting WHS risk controls for product design, including:

- ensuring that level and reliability of risk control is commensurate with likelihood and impact of risk
- impact on safety of alterations to product during its life
- minimising impact of possible failure or defect by ensuring controls include fail-safe action
- WHS principles, materials, technology and systems that apply to product design
- internal and external sources of WHS information and data, and procedures for accessing them
- human cognitive and perceptual capabilities and other basic factors relevant to the safe design of products in the performance evidence
- factors affecting safe design, including work-related psychosocial factors, occupational violence, shift work, repetitive work, awkward postures, lighting, thermal environment and work layout
- principles of anthropometry and biomechanics as they relate to safe design principles to control WHS risks
- communication and consultation processes, and key personnel related to communication
- hierarchy of control measures and criteria for choosing between different WHS risk controls
- key personnel, including change agents, within workplace management structure
- legal liability in relation to providing advice
- organisational behaviour and culture as they impact on WHS, and on change
- WHS risk management and the principles and practices of a systematic approach to WHS management.
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Assessment Conditions

Assessment must comply with WHS laws, legal responsibilities and duty of care required for this unit. It must be conducted in a safe environment where evidence gathered demonstrates consistent performance of typical activities undertaken by individuals carrying out WHS duties in the workplace, and must include access to:

- reports from other parties consulted about WHS risk in a product's life cycle
- legislation, standards, guidelines, research and industry data required to demonstrate the performance evidence
- case studies and, where possible, real situations
- opportunities for interaction with others.

Assessors of this unit must satisfy the assessor requirements in applicable vocational education and training legislation, frameworks and/or standards.

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