

Title	Make leadlights		
Level	4	Credits	20

Purpose	<p>This unit standard is for experienced people in the glass processing industry working with decorative glass.</p> <p>People credited with this unit standard are able to: prepare a cartoon for leadlights; prepare the work environment for making leadlights; cut glass for leadlights; assemble leadlights; solder leadlights; finish leadlights; and complete job requirements.</p>
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Classification	Glass and Glazing > Glass Processing and Manufacturing
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Available grade	Achieved
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Guidance Information

1 Definition

Worksite requirements – refer to instructions to staff on policy and procedures which are documented in memo or manual format and are available in the workplace. These requirements include – company specifications and procedures, work instructions, manufacturer’s specifications, product quality specifications, legislative requirements.

2 Legislation relevant to this unit standard includes – Health and Safety at Work Act 2015, Health and Safety in Employment Regulations 1995, Hazardous Substances and New Organisms Act 1996, Resource Management Act 1991.

Outcomes and performance criteria

Outcome 1

Prepare a cartoon for leadlights.

Performance criteria

1.1 Cartoon design is evaluated to identify any constraints in terms of safety, structural soundness and longevity of the end product.

1.2 Any constraints are communicated to the customer in accordance with worksite requirements.

Range constraints include – scaling current patterns, matching glass, potential weaknesses in the design and/or glass, aspect, light.

- 1.3 Draft cartoon is designed to meet customer's specifications.
- Range specifications include – design, colour of glass, type of glass, size.
- 1.4 Full scale cartoon is drawn to specifications with provision for ties, as required, in accordance with worksite requirements.
- 1.5 Final design is agreed with the customer in accordance with worksite requirements.

Outcome 2

Prepare the work environment for making leadlights.

Performance criteria

- 2.1 All necessary equipment, tools and installation materials are checked and assembled prior to commencement of work in accordance with worksite requirements.
- 2.2 Work area is prepared to prevent damage to surrounding area and protect public safety in accordance with worksite requirements.
- Range surrounding area includes – furnishings, fixtures and fittings, exterior surfaces;
measures to protect public safety include – warning signs, barriers or cordons.

Outcome 3

Cut glass for leadlights.

Performance criteria

- 3.1 Protective clothing and equipment necessary for the task is used in accordance with legislative and worksite requirements.
- Range protective clothing and equipment includes – overalls, full face mask, gloves, protective apron.
- 3.2 Selected glass is cut to match design specifications with least possible wastage in accordance with worksite requirements.
- 3.3 Cut glass is set out on cartoon to design requirements in accordance with worksite requirements.

Outcome 4

Assemble leadlights.

Performance criteria

- 4.1 Building edge frames are aligned with the cartoon, measurements are checked and established securely before work progresses in accordance with worksite requirements.
- 4.2 Selected comes are cut, stretched, and placed to meet design and glass requirements in accordance with worksite requirements.
- 4.3 Window glass is assembled and pinned in sequence of its weight bearing function in accordance with worksite requirements.
- 4.4 Comes are fitted tightly without gaps or movement of the glass in the window in accordance with worksite requirements.
- 4.5 Finished window is checked to ensure it matches the cartoon in accordance with worksite requirements.

Outcome 5

Solder leadlights.

Performance criteria

- 5.1 The flux and solder used are compatible with the material being soldered in accordance with worksite requirements.
- 5.2 Soldering is completed on both sides of the glass without gaps in accordance with worksite requirements.
- Range soldering includes – joint achieved in one contact, no excess solder on the glass, not too big a joint.
- 5.3 All soldered joints are cleaned of surplus flux in accordance with worksite requirements.

Outcome 6

Finish leadlights.

Performance criteria

- 6.1 Cement is mixed to meet environmental conditions in accordance with worksite requirements.
- 6.2 Comes are cemented with all channels filled in accordance with worksite requirements.
- Range requirements include – whitening to absorb excess moisture, ensuring window is suitably dry.

- 6.3 All joints are cleaned of surplus cement in accordance with worksite requirements.
- 6.4 Joints are polished to design requirements in accordance with worksite requirements.

Outcome 7

Complete job requirements.

Performance criteria

- 7.1 Work is completed in accordance with the job specifications and customer's requirements.
- 7.2 Machinery, equipment and materials are cleaned and stored in accordance with manufacturer's and worksite requirements.
- 7.3 Post-processing clean-up is conducted to ensure work area is left free of debris in accordance with worksite requirements.
- 7.4 Work is completed without injury to personnel and damage to product, equipment, and machinery in accordance with worksite requirements.

Replacement information	This unit standard, unit standard 25775, and unit standard 25777 replaced unit standard 2055.
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Planned review date	31 December 2022
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 June 2009	31 December 2017
Review	2	18 June 2015	N/A
Rollover and Revision	3	25 August 2022	N/A

Consent and Moderation Requirements (CMR) reference	0073
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council at qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.