

Safe Design of Building and Structures Report

Project Number and Address	BGYVZ – 2-10 Birch Street, North St Mary's, NSW 2760
Client	PLANNING & ENVIRONMENT, Land & Housing Corporation
Project description	Seniors Housing development, 10 x 1 bedroom units & 12 x 2 Bedroom units.
Building and structures	Brief description of construction – Two storey, slab on ground & suspended slab to first floor, brick cavity construction, sheet metal roof on timber trussed frame.
Designer / Architect	DTA Architects (nominated architect - Daniel Donai NSW Architects registration board No. 9068)
Landscape Architect	Ray Fuggle & Associates Pty Ltd
Civil / Structural Engineer	MSL Consulting Engineers Pty Ltd
Hydraulic / Electrical Engineer	Abel & Brown Pty Ltd (Hydraulics) / Greenview Consulting Pty Ltd (Electrical)

This safety and risk assessment report by the designer addresses the requirements of the NSW Work Health and Safety Act 2011 No 10, in relation to the above project. This report is intended to inform the client of any health and safety risks/hazards associated with the design, construction, maintenance and eventual demolition of the project. If the designer is not involved during the construction phase, the client is to provide this information to the constructors.

Key Sections of the WHS Act relating to the duties of the designer are:

Section 22

The WHS Act **requires the designer** to ensure, so far as is reasonably practicable, that a structure is designed to be without risks to the health and safety of persons who:

- At a workplace, use the structure for a purpose for which it was designed
- Construct the structure at a workplace
- Carry out any reasonably foreseeable activity at a workplace in relation to the manufacture, assembly, use, proper demolition or disposal of the structure, or
- Are at or in the vicinity of a workplace and are exposed to the structure or whose health and safety may be affected by an activity related to the structure

Designers **must** give adequate information to each person who is provided with the design in order to give effect to it concerning:

- The purpose for which the structure was designed
- The results of any calculations, testing, analysis or examination
- Any conditions necessary to ensure that the structure is without risks when used for a purpose for which it was designed or when carrying out any activity related to the structure - -such as construction, maintenance and demolition.

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In relation to the proper demolition or disposal of a structure, designers also have a duty to:

- Carry out, or arrange the carrying out of, any calculations, analysis, testing or examination that may be necessary for the structure to be without risks to health and safety, and
- Provide adequate information to each person who is provided with the design concerning any conditions necessary to ensure (as far as is reasonably possible) that the structure is without risks to health and safety.

The construction of this building project is subject to the conditions and requirements of:

- Construction Code of Australia.
- Building Contract, contract documents, and the Codes and Practices of the NSW Land and Housing Corporation
- Australian Standards and other standards referenced in the above.
- Development approval conditions
- Work Health and Safety Act 2011 No 10

The following identifies specific safety & health risks and remedial actions to improve safety in relation to this project.

Insert additional lines as required

Factors	What is the risk or issue on this site?	Design	Construction (including demolition)	Maintenance	Demolition	Design Mitigation	Risk brought to attention of others
DESIGN CONSULTANTS	ALL ITEMS INCLUDING BUT NOT LIMITED TO.						
Designer /Architect	Building structure and design needs to be adequate for intended use.	All building design elements to be fully designed and documented by a qualified architect.	N/A	N/A	N/A	Obtain certificates of adequacy from architect.	Drawings, reports, specifications & all other documentation. Including but not limited to.
Structural Engineer	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hydraulic Engineers	Hydraulic elements need to be adequate for intended use.	All hydraulic elements to be fully designed and documented by a qualified hydraulic engineer.	N/A	N/A	N/A	Obtain certificates of adequacy from hydraulic engineer.	Drawings, reports, specifications & all other documentation. Including but not limited to.
Landscape Architects	Landscape needs to be adequate for intended use.	All landscape elements to be fully designed and documented by a qualified landscape architect.	N/A	N/A	N/A	Obtain certificates of adequacy from landscape architect.	Drawings, reports, specifications & all other documentation. Including but not limited to.

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DESIGN ISSUES							
ALL ITEMS INCLUDING BUT NOT LIMITED TO.							
Site Design	Trip hazards, falling objects & hazardous materials.	Minimise all trip and slip hazards. Provide security as required. Provide safe transit on site through pedestrian or vehicle.	As per BCA and Australian Standards.	Maintain a tidy site to reduce the risk of trips and falls on the site. Maintain landscaping so as not to become overgrown and reduce vision to some site areas.	N/A	Provide a tidy site to reduce the risk of trips and falls. Including but not limited to.	Shown on drawings, reports, specifications & all other documentation. Including but not limited to.
Floor Surfaces	Risk of trip and slipping hazards.	Design all surfaces with appropriate slip resistant ratings. Design all vertical Heights to Australian standards.	As per BCA and Australian Standards.	Keep areas clear of lose objects.	N/A	Design all surfaces with appropriate slip resistant ratings. Ensure all vertical transitions are in accordance with BCA and Australian Standards.	Shown on drawings, reports, specifications & all other documentation. Including but not limited to.
First floor Windows	Risk of children falling & cleaning.	Design windows to have a min. 900mm sill, provide fixing to prevent window from opening beyond 100mm.	N/A	Keep objects clear of windows to avoid climbing.	N/A	Installer / manufacture to provide certificate of compliance.	Shown on drawings, reports, specifications & all other documentation. Including but not limited to.
Window Cleaning	Maintenance, slip, trip hazard & cleaning.	Do not obstruct access to window for cleaning from ground floor. (excluding balconies)	N/A	Keep objects clear of windows to avoid climbing.	N/A	Provide appropriate signage and visual markers to designated areas. Keep access areas clear of lose objects. Including but not limited to.	Signage to warn of cleaning works or potential slip hazards. Including but not limited to.
Lighting	Security & not enough light for safety.	Lighting is design to maximize security to and from the building as well as visual illumination to prevent trip hazards.	As per Electrical Engineers details.	Maintain globes and fittings as required.	N/A	Electrical engineer to design lighting to meet current standards.	Shown on drawings, reports, specifications & all other documentation. Including but not limited to.
Roof Access	Access to roof during occupation for maintenance is considered hazardous.	Roof Anchors are provided in the design as per Australian standards.	N/A	Keep clear of lose objects.	N/A	Provide barriers and warning signs to prevent unauthorised entry. Including but not limited to. Ensure that all persons on site wear Personal Protective Equipment. (PPE) including harnesses etc. Including but not	Shown on drawings, reports, specifications & all other documentation. Including but not limited to.

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						limited to.	
Ceiling Access	Work in confined spaces is considered hazardous.	Ceiling access provided in each first floor units to gain access to roof space.	N/A	Keep clear of lose objects.	N/A	N/A	Shown on drawings, reports, specifications & all other documentation. Including but not limited to.
Detention Tank.	Work in confined spaces is considered hazardous.	Provide lockable lids, barriers and warning signs to prevent unauthorised entry. Including but not limited to.	N/A	Maintain barriers, and warning signs to prevent unauthorised entry. Ensure that all persons on site wear Personal Protective Equipment. (PPE) including masks etc. Including but not limited to.	N/A	Provide barriers and warning signs to prevent unauthorised entry. Including but not limited to. Provide lockable lids. Ensure that all persons on site wear Personal Protective Equipment. (PPE) including masks etc. Including but not limited to.	Signage and through site induction by site project managers. Including but not limited to.
Materials Maintance	Trip hazards, falling objects & hazardous materials.	Materials selected are done to reduce future maintance on site.	N/A	Keep areas clear of lose objects.	N/A	N/A	Drawings, reports, specifications & all other documentation. Including but not limited to.
Vegetation	Security.	Landscape is design to enable security to and from the building as well as visual definition to areas. Minimize trip hazards.	As per Landscape Architects details.	Maintain plants to prevent over growth, resulting in trip hazards and security issues.	Existing trees to be removed as required, as per councils approval.	Landscape Architect to design planting to meet current standards set by council, HNSW and other relevant authorities.	Drawings, reports, specifications & all other documentation. Including but not limited to.
Building Design	Trip hazards, falling objects & hazardous materials.	Materials selected are done to reduce future maintance on site. As well as to reduce slip and trip hazards.	Residence should provide a tidy site to reduce the risk of trips and falls on site. Materials for construction should be stored in designated areas away from access ways and work areas.	Maintain a tidy site to reduce the risk of trips and falls on site.	N/A	Provide a tidy site to reduce the risk of trips and falls on site. Including but not limited to.	Drawings, reports, specifications & all other documentation. Including but not limited to.
CONSTRUCTION	TO FUTURE STAGE (Tender)						

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Site Conditions	Trip Hazards, hearing loss, moving machinery & excavations.	Site Conditions	Trip Hazards, hearing loss, moving machinery & excavations.	Site Conditions	Trip Hazards, hearing loss, moving machinery & excavations.	Site Conditions	N/A
Vegetation	Lifting Objects.	Vegetation	Lifting Objects.	Vegetation	Lifting Objects.	Vegetation	Lifting Objects.
Waste Management	Trip hazards, falling objects & hazardous materials.	Waste Management	Trip hazards, falling objects & hazardous materials.	Waste Management	Trip hazards, falling objects & hazardous materials.	Waste Management	Trip hazards, falling objects & hazardous materials.
Falls, Slips & Trips	Working at Heights	Falls, Slips & Trips	Working at Heights	Falls, Slips & Trips	Working at Heights	Falls, Slips & Trips	Working at Heights
	Slippery or Uneven Surfaces		Slippery or Uneven Surfaces		Slippery or Uneven Surfaces		Slippery or Uneven Surfaces
Falling Objects	Loose Materials or Small Objects	Falling Objects	Loose Materials or Small Objects	Falling Objects	Loose Materials or Small Objects	Falling Objects	Loose Materials or Small Objects
	Building Components		Building Components		Building Components		Building Components
Traffic Management	The risk for this site is the risk of a collision where deliveries and other traffic are moving within the site.	Traffic Management	The risk for this site is the risk of a collision where deliveries and other traffic are moving within the site.	Traffic Management	The risk for this site is the risk of a collision where deliveries and other traffic are moving within the site.	Traffic Management	The risk for this site is the risk of a collision where deliveries and other traffic are moving within the site.
Services	General – Electrocuting & Hazardous material	Services	General – Electrocuting & Hazardous material	Services	General – Electrocuting & Hazardous material	Services	General – Electrocuting & Hazardous material
Manual Tasks	Lifting Objects.	Manual Tasks	Lifting Objects.	Manual Tasks	Lifting Objects.	Manual Tasks	Lifting Objects.
Hazardous Substances	Powered Materials (dust), Treated timbers, Volatile	Hazardous Substances	Powered Materials (dust), Treated timbers, Volatile	Hazardous Substances	Powered Materials (dust), Treated timbers, Volatile	Hazardous Substances	Powered Materials (dust), Treated timbers, Volatile
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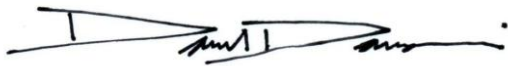
	organic compounds (glue, solvents etc), Synthetic mineral fibres.		organic compounds (glue, solvents etc), Synthetic mineral fibres.		organic compounds (glue, solvents etc), Synthetic mineral fibres.		organic compounds (glue, solvents etc), Synthetic mineral fibres.
Confined Spaces	Excavation	Confined Spaces	Excavation	Confined Spaces	Excavation	Confined Spaces	Excavation
	Enclosed Spaces – under ground detention.		Enclosed Spaces – under ground detention.		Enclosed Spaces – under ground detention.		Enclosed Spaces – under ground detention.
	Small Spaces		Small Spaces		Small Spaces		Small Spaces
Public Access	Worker and Public	Public Access	Worker and Public	Public Access	Worker and Public	Public Access	Worker and Public
Operational use of Building	N/A	Operational use of Building	N/A	Operational use of Building	N/A	Operational use of Building	N/A
Other High Risk Activities	Placement of concrete and structural steel	Other High Risk Activities	Placement of concrete and structural steel	Other High Risk Activities	Placement of concrete and structural steel	Other High Risk Activities	Placement of concrete and structural steel
	Managing Noise and Hearing loss		Managing Noise and Hearing loss		Managing Noise and Hearing loss		Managing Noise and Hearing loss
POST CONSTRUCTION	TO FUTURE STAGE (Tender)						
Site Conditions	N/A	N/A	N/A	N/A	N/A		N/A
Building Materials	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Confined Spaces	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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Traffic Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Waste Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A

I, **Daniel Donai** being the **Senior Partner of** De Angelis Taylor & Associates Nominated Architect of De Angelis Taylor & Associates **certify that:**

To the best of my knowledge, information and belief, I have prepared this report in accordance with the objectives of the Work Health and Safety Act 2011 and have integrated the input of all other consultants who have certified their own portions of the documentation with respect to their professional responsibilities as reflected in the attached certificates.

Daniel Donai



de angelis taylor + associates

architecture | interior design | urban design

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Reference:

Safe Design of Structures, Code of Practice July 2012

Available from Safe Work Australia www.safeworkaustralia.gov.au

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