

WAH Inspection Findings & Case Studies



MINISTRY OF
MANPOWER

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Date (01 03 2022)



A Great Workforce A Great Workplace

So What is Considered a Work At Height?



A Great Workforce A Great Workplace



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Video credit - <https://www.youtube.com/watch?v=-S2AEgjNYL0>



A Great Workforce A Great Workplace

WSHAlert

24 August 2020, Ref: 2021042

Accident Advisory: Worker fell though floor opening

Ref: 2021038 WSH Alert Accident Notification dated 5 August 2020

On 3 August 2020, a group of workers was carrying out Addition & Alteration (A&A) works on the second storey of a building. When two of the workers tried to remove the wooden planks on the floor, one of them fell through a floor opening under the planks and landed on the first storey. The worker was conveyed to the hospital where he succumbed to his injuries.



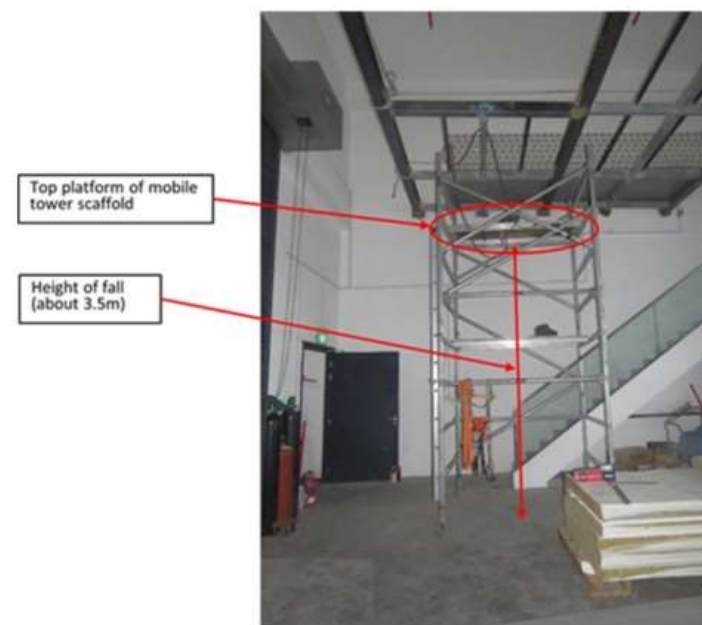
Figure 1: The worker fell 6.4m to the ground.

WSHAlert

4 August 2021, Ref: 2122030

Worker fell from mobile tower scaffold

On 13 July 2021, a worker was standing on the top platform of a mobile tower scaffold around 3.5m high. He fell off the platform when he started welding work. There was no guard rails at the top of the work platform. The worker was conveyed to the hospital where he subsequently succumbed to his injuries.



Overview of the accident scene.



WSHAlert

9 December 2020, Ref: 2021083

Accident Advisory: Worker fell from ladder

Ref: 2021068 WSH Alert Accident Notification dated 30 October 2020

On 30 October 2020, a worker was at a private dwelling working under a roofing structure when he fell from an A-frame ladder. He was found lying on the floor in a semi-conscious state next to the ladder. The worker was conveyed to the hospital where he succumbed to his injuries on 4 November 2020.



Figure 1: The accident scene.

WSHAlert

23 August 2021, Ref: 2122033

Worker fell off elevating platform

On 13 August 2021, a worker was pulling a hand trolley backwards in a loading bay when he fell off the open side of an elevating platform next to a ramp. He may have mistakenly entered the elevating platform instead of the ramp. He was conveyed to the hospital where he passed away the following day.



Overview of accident scene.



Is there a magic number?



WSH (Work At Heights) Regulations 2013



Reg 2 of WSH (Work At Heights) Regulations –

“work at height” means work —

- (a) in or on an elevated workplace **from which a person could fall**;
- (b) in the vicinity of an opening **through which a person could fall**;
- (c) in the vicinity of an edge **over which a person could fall**;
- (d) on a surface **through which a person could fall**; or
- (e) in any other place (whether above or below ground) **from which a person could fall**,

from **one level to another** and it is **reasonably likely** that the person or any other person would be **injured due to the distance of the fall**;

“Reg” = Regulations



Avoidance of work at height

Reg 4. It shall be the duty of the responsible person to ensure that **no work at height is carried out where it is reasonably practicable to carry out the work safely otherwise than at height.**



Open sides and openings

Reg 8.—(2) Subject to every **open side or opening** into or through which a person is **liable to fall more than 2 metres** shall be **covered or guarded** by **effective guard-rails or barriers** to prevent fall.





Open sides and openings

Reg 8.—(3)(4) The cover, guard-rail or barrier **may be removed** where free access is required for work actually in progress at or near the open side or opening ... shall be reinstated or replaced immediately ...

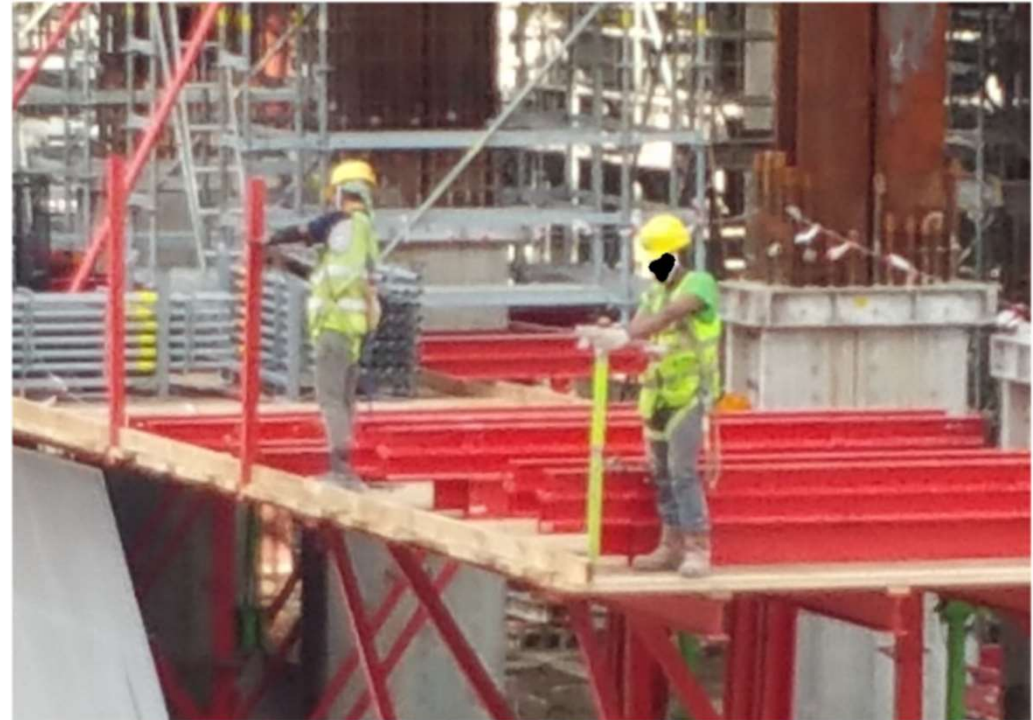


Open sides and openings

Reg 8.—(5) Where it is **not reasonably practicable to comply** with paragraph (2), or where a cover, guard-rail or **barrier is removed under paragraph (3)**, or during the **installation, alteration or removal of the covers, guard-rails or barriers** —

(a) **a travel restraint system shall be used** to prevent a person falling into or through the open side or opening referred to in paragraph (2); or

(b) where it is **not reasonably practicable to comply with subparagraph (a)**, a **fall arrest system** shall be used.



Cover, guard-rail and barrier to prevent fall

Reg 9.—(2) Where a **cover** is provided it shall be -

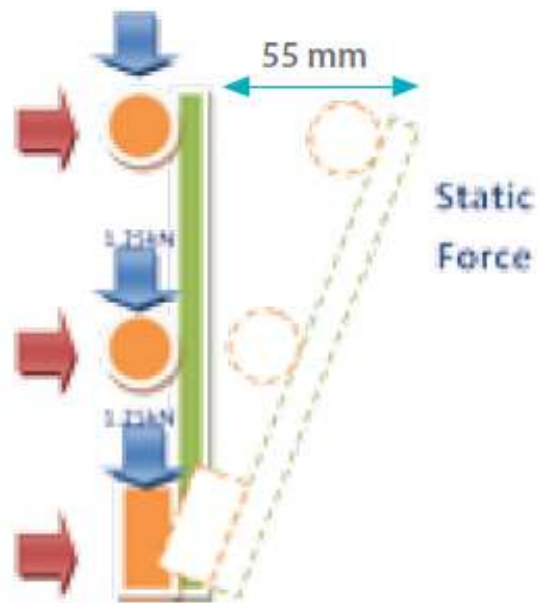
- (a) is of **good construction, sound material** and **adequate strength** to withstand the impact during the course of work in the workplace; and
- (b) is **securely fixed in place** to prevent accidental displacement.



Cover, guard-rail and barrier to prevent fall

Reg 9.—(3) Where any **guard-rail or barrier** is provided ... —

- (i) is of **good construction, sound material and adequate strength** to withstand the impact ...;
- (ii) is **placed on the inside of the uprights** and
- (iii) is **so placed so as to prevent the fall** of any person;





Cover, guard-rail and barrier to prevent fall

Reg 9.—(3) Where any **guard-rail or barrier** is provided —

(b) the top guard-rail or the barrier is **at least one meter above the work platform or working place** from which any person at work is liable to fall;

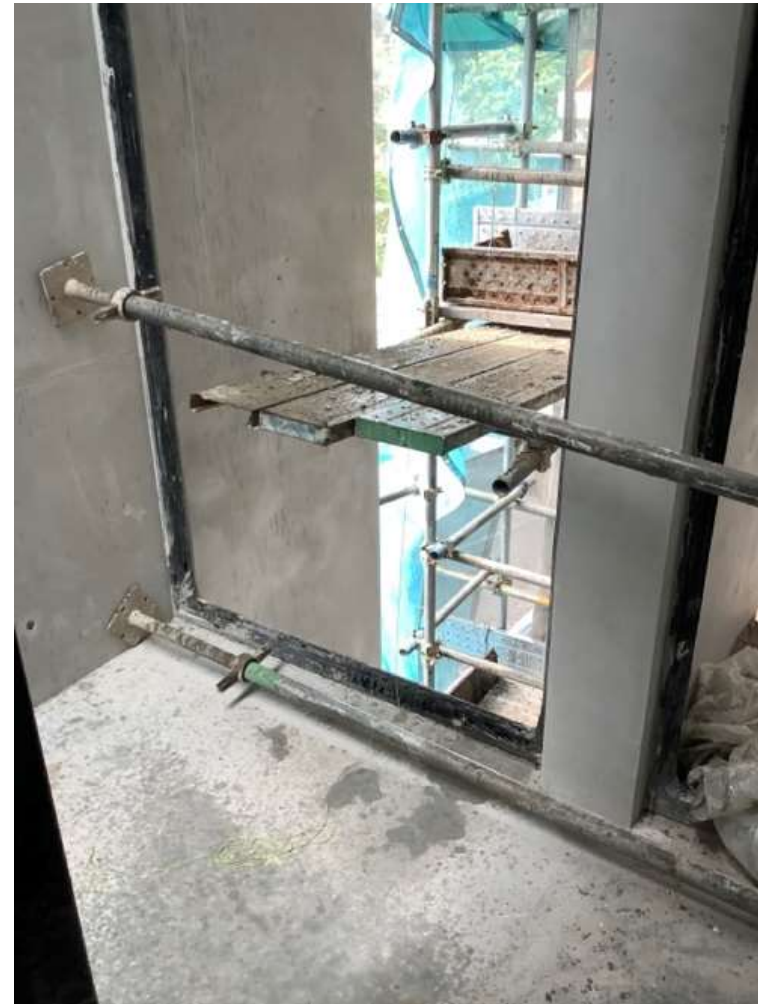


Cover, guard-rail and barrier to prevent fall

Reg 9.—(3) Where any **guard-rail or barrier** is provided ... (c) the **vertical distance** —

- (i) between any 2 **adjacent guard-rails** provided; or
- (ii) between any **work platform** or working place and the **guard-rail** immediately above it,

does **not exceed 600 millimetres.**



Staircases

Reg 13—... every staircase in the workplace or every staircase which affords a means of exit from the workplace shall be provided and maintained with a **substantial handrail and lower rail** or other barrier to prevent any person falling, which —

- (a) if the staircase has an **open side**, shall be on that side; or
- (b) if the staircase has 2 open sides, shall be on both sides.



Safe means of access and egress between different working levels in building or structures

Reg 14.—Where .. any person is required to carry out any **work at height** ... it shall be the duty of the occupier of the workplace to take ... such measures as are necessary to **ensure safe means of access to and egress from** any area in the workplace ...



Work on roofs

Reg 16.—Where in a workplace any person carries out any **work on any roof** from which he is liable to fall off or through a distance of **more than 2 metres**...

(a) to provide and maintain —

(i) **protection** ... against any **sliding or falling** from the roof ... **and**

(ii) **sufficient and secured anchorage** for the attachment of a full-body harness or a restraint belt, as the case may be ... **and**

(b) to **ensure that the person** who carries out such work in that workplace **uses the protection and anchorage** referred to in paragraph (a).





Fragile surfaces

Reg 17.—(1) ... it shall be the duty of the responsible person of a person who carries out or is to carry out work at height to ensure that the person at work —

- (a) shall not **pass across or near a fragile surface**; and
- (b) shall not **work on, from or near a fragile surface**,

where it is **reasonably practicable** to carry out the work without him doing so.



Fragile surfaces

Reg 17.—(2) Where it is **not reasonably practicable** to carry out work at height safely without passing across or near, or working on, from or near, a fragile surface provide and maintain **suitable and sufficient platforms, covers, guard-rails** or similar means of support or protection so that any foreseeable loading is supported by such supports or borne by such protection.



Ladders

Reg 18.—(1) Where a **ladder is being used** to carry out any work at height in a workplace ...

(2) Every ladder in a workplace shall —

(a) be of **good construction, sound material** and **adequate strength**;

(b) be **free from patent defects**; and

(c) be **suitable** and **safe for the purpose** for which it is intended.



Ladders

Reg 18.—(3) The **surface** upon which any ladder (except for fixed ladders) rests or bears upon when used by a person shall —

(a) be **stable**;

(b) be **level and firm**; and

(c) be of **sufficient strength to safely support** the ladder and any person and load intended to be placed on it.

(4) Every ladder in a workplace shall be **so positioned as to ensure its stability during use.**



Ladders

Reg 18.—(5) Notwithstanding paragraph (4), every **ladder which leans against** a wall, building, structure or tree during use shall be **securely fixed or lashed, or is firmly held** by a person stationed **at the foot of the ladder** to prevent the ladder from **slipping**.





Ladders

Reg 18.—(6) Where a ladder is used for access or as a working place, the **ladder shall rise, or adequate handhold** shall be provided, to a height of **at least one metre above —**

(a) the **place of landing**; or

(b) the **highest rung to be reached by the feet** of any person working on the ladder.



Ladders

Reg 18.—(7) Where a **fixed vertical ladder** is used in a workplace ...

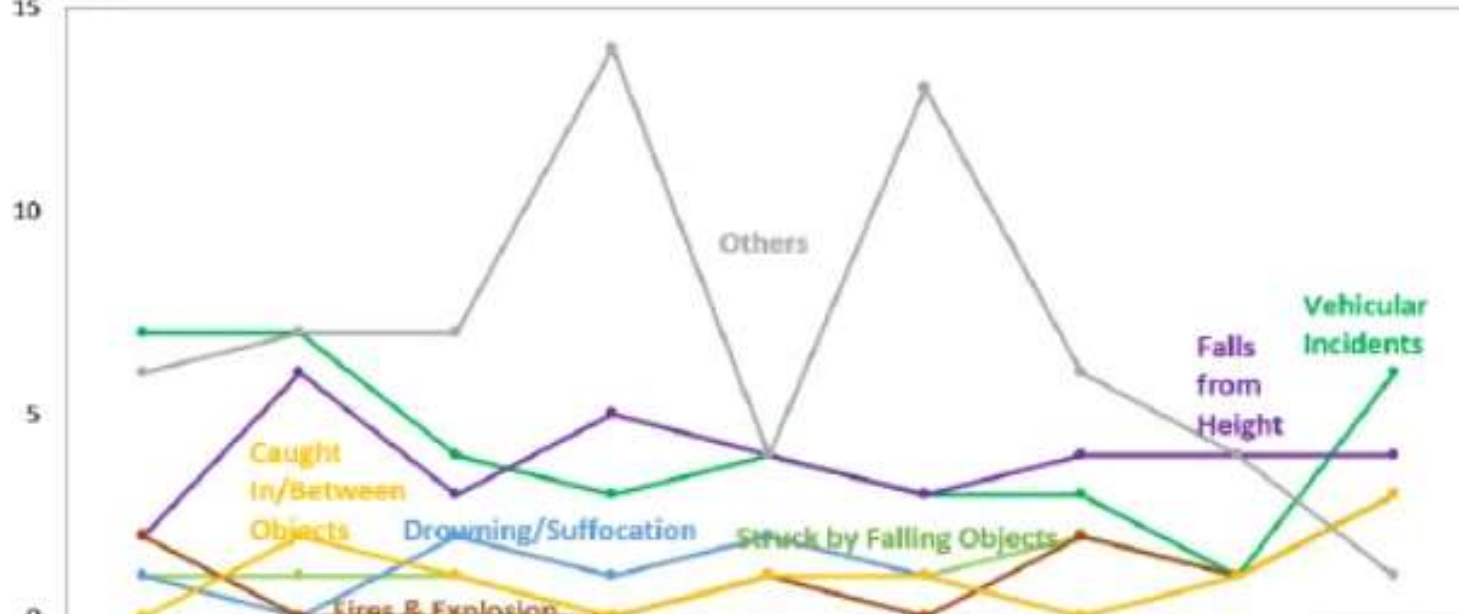
(8) Every fixed vertical ladder or run of fixed vertical ladders ... which rises a vertical distance of **over 9 metres** shall, **if practicable**, be provided with an **intermediate landing** ...

(9) **Every landing** place referred to in paragraph (8) shall be provided with sufficient and suitable **guard-rails or barriers to prevent falls**.

(10) ... rises a vertical distance of **more than 3 metres**, there shall be provided a **safety cage or other practicable measures** to prevent fall of the person.



Number of Workplace Fatal Injuries



	Jan-Jun 2017	Jul-Dec 2017	Jan-Jun 2018	Jul-Dec 2018	Jan-Jun 2019	Jul-Dec 2019	Jan-Jun 2020	Jul-Dec 2020	Jan-Jun 2021
Vehicular Incidents	7	7	4	3	4	3	3	1	6
Falls from Height	2	6	3	5	4	3	4	4	4
Struck by Falling Objects	1	1	1	0	1	1	2	1	3
Drowning/Suffocation	1	0	2	1	2	1	0	1	3
Fires & Explosion	2	0	0	0	1	0	2	1	3
Caught In/Between Objects	0	2	1	0	1	1	0	1	3
Others	6	7	7	14	4	13	6	4	1





**Unfortunately the
human body is
more fragile than
we think it is.**



Thank You

