Principal Designer Working Group

Root Cause Analysis – Capture & Application of Lessons Learnt

Supporting Home Safe and Well

13th October 2022

Safety Alerts - Recent

- Within the period since we last presented our Safety Alerts review back on the 21st July 2022 we have received 4 and reviewed 4 safety alerts within our safety team (Principal Designers / H & S Practitioners) at our monthly Safety, Design and Designers meetings.

National Highways Safety Alert	Topic	Date Received
NHa303	Drone Incident – Parrot Anafi - Link	12th September 2022
NHa304	Safe Installation of Surface Laid Cables - Link	12th September 2022
NHa304 (304 repeated)	Safe Installation of Debris Screen - Link	30th September 2022
NHa305	Robel Lithium-ion Battery and Robel Tamper - Link	7th June 2022

Available at http://www.highwayssafetyhub.com/alerts.html

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Categorising – Safety Alerts

Discipline*	Number of SA / NM	Check Sheet	C/S - CPP	Services	Access - Red Line Boundary	Incursion	RAMS	For Information	Design Change	Totals
All (TLG)	96	16	6	5	7	4	37	60	0	135
Structures (TLG)	22	6	2	0	0	0	4	9	11	32
Highways (TLG)	29	7	8	2	6	0	8	9	16	56
Geotech (TLG)	13	6	2	0	2	0	2	2	0	14
Tech (TLG)	6	2	1	2	0	0	1	3	1	10
Environment (TLG)	9	2	0	0	0	0	6	5	0	13
N/A	26	9	4	2	2	0	17	4	1	39
Totals	201	48	23	11	17	4	75	92	29	299
Percentage of total		16.1	7.7	3.7	5.7	1.3	25.1	30.8	9.7	100.0

Key	Col G, L & M
Check Sheet (RAG) Required	
Check Sheet (RAG) / Input to CPP	
Services	
Access / Working Area/RLB	
Incursion	
RAMS - Check Sheet (RAG)	
For Information	
Design Change (MB to approve)	

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National Highways H & S Alerts – Arcadis Summary

NHa295 – Drone Incident – Parrot Anafi

Lessons Learned:

- When surveying at an altitude of 20m, the aircraft began to display a number of ‘wobbles’ and veer from its stationary position towards the network.
- The chief UAV pilot on site then took control of the aircraft and initiated a forced landing, resulting in the aircraft coming to a halt in a nearby tree.
- The operation was being carried out in accordance with the activity’s GG104 Safety Risk Assessment. The incident occurred on the final flight of the day, with no issues experienced up until that point.
- For those looking to undertake drone operations on behalf of National Highways, please also be aware that we have a Drones Portal Page for Activity Managers to refer to when producing a GG104 SRA. Unfortunately at this time, the page is only accessible to NH employees, however NH are in conversations to create something similar on the Supply Chain Portal.
- If you have any further questions, feel free to contact Drones@NationalHighways.co.uk

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National Highways H & S Alerts – Arcadis Summary

NHa304 – Safe Installation of Surface Laid Cables

Lessons Learned:

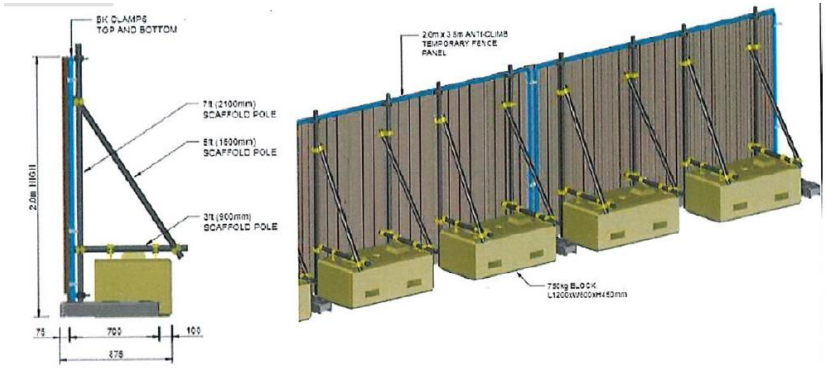
- Cables laid in this manner present:
  - A slip / trip hazard to the workforce, and / or members of the public seeking refuge
  - An increased risk of damage leading to;
    - Possible harm to people
    - Loss of essential services such as CCTV monitoring our network
  - A risk of damage to plant & equipment
- Raising the Bar 9 guidance advises that:
  - Temporary surface cables should be sleeved in purple ducting for protection and visibility and;
  - Where possible, that ducting should be raised off the ground using boundary fence lines, stakes etc.
- Cables are often unmarked and are left on site long after schemes are complete.
- RTB 9 says a walkthrough should be undertaken to ensure no legacy hazards are left after the end of a scheme.

National Highways H & S Alerts – Arcadis Summary

NHa304 – Safe Installation of Debris Screen

Lessons Learned:

- The 'debris screen' illustrated on this alert is a substantial structure, being 2m high. What sort of debris requires such a structure?
- Installation of such a structure with heavy kentledge blocks to hold it in place is a potentially hazardous activity requiring the use of plant on potentially steep slopes or other difficult to reach areas. It will typically be installed at the edge of site, where overturning incidents of small plant have been highlighted in a number of safety alerts.
- This system doesn't appear passive - how is it approved/ certified for use where it could be struck by vehicles. A site specific risk assessment should be undertaken to ensure suitability.
- The Safety Alert notes that advice should be used, where the screening is applicable, and the information discussed with your team highlighting the following points:
  - Ensure that a Safe Systems of Work (SSOW) is in place and is adequate for the task - If in doubt stop
  - Adequate lighting must be available - If considered inappropriate - stop, contact your supervisor and agree a suitable alternative
  - A rigorous POWRA must be undertaken to identify all hazards prior



National Highways H & S Alerts – Arcadis Summary

NHa305 – TFL: Robel Lithium-ion Battery and Robel Tamper

Lessons Learned:

- This alert is for information only
- There was an incident on Network Rail whereby a Robel lithium-ion battery was removed from a charger and placed on a 62.20 vertical tamper. When the test button was pushed a loud bang and a puff of smoke was emitted from the Robel vertical tamper unit.
- The equipment was placed in quarantine. The next morning the battery was unclipped from the vertical tamper and placed on the floor for inspection. After two minutes a hissing noise was heard coming from the battery followed by smoke. The Fire Brigade were called to the incident and the battery was made safe.
- Noted that Li Ion batteries can be temperamental/ difficult to extinguish if they catch fire
- You must stop using the following immediately and make sure the batteries are removed from the plant and both are stored safely until further notice:
  - Robel model 60.20 tamper
  - Robel model 10.20 rail drill
  - Robel model 30.20 impact wrench
  - Robel model 12.20 rail band saw

Robel 60.20 battery tamper


Q&A