

The New Zealand LIFT FAX

The New Zealand Lift Fax is produced bi-monthly for the NZ lift industry. Just send your email address to LEC to subscribe.

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WHAT'S GOING UP or DOWN THIS MONTH:

CHRISTCHURCH LIFT INDUSTRY STRUGGLES:

There seems to be some businesses thriving such as out of town demolition companies and assessors, following the restructuring since the earthquakes of November 2010 and 11, but there is also many businesses like the lift industry who have downsized or sent employees to other areas of work in New Zealand awaiting rebuild work.

Some smaller businesses have survived through out-of-town work, but with reduced incomes and tightened overheads in most instances, the feeling of being in-limbo prevails.

Personally we have been paid out the earthquake levy which is sitting in the bank, and EQC doesn't respond to any written or email inquiry; presumably payout means job finished, although the insurers seemingly prefer to just do nothing while EQC finishes its land assessments in our Green/Blue TC3 area.

Hopefully if we haven't succumbed to financial despair, 2013 will see a beginning in rebuild work for most, but still who knows with little to no facts forthcoming. Criticism arising from extended delay is on the rise, but true to form those unaffected are beginning to box those who are as just moaners! Latest hearsay, we're due for our rebuild in 2015!

EDITORIAL: WHERE ARE THE LIFT INSPECTORS GOING?

I have spoken nearly incessantly on presumably deaf ears of the lift certification void created in New Zealand with introduction of the Building Act in 1991 and with the removal of the centralised Ministry of Transport lift certification process, but of late after 21 or more years of this void, a glimmer of the necessity for a more consistent process of lift inspection has emerged for D2 lift installations under Council Consent processes.

Remember, it is the Consent process that is in place to ensure a consistent, safe process of inspection, certification and documenting of all lifts in NZ, actually does take place. All those lifts you ride in each day rely on the consistency of this process to ensure the equipment installed in NZ is safe for you to use, and yet this process has been allowed to re-evolve itself into a *laissez-faire* void due to an uninterested lift industry leadership and Council officers responsible to administer the compliance process under the Building Act throughout the country, being basically ignorant of any safe consistent process.

The glimmer of hope I speak of is that the auditing of a new breed of Council officers are beginning to question the process of D2 certification by asking for specific documentation and certification, admittedly each council throughout the country is still doing its own thing due to a lack of direction on the part of the DBH to recognise the issue, but anything is better than the void.

The CBIP (Certification Board for Inspection Personnel) as an independent certification body has attempted to provide a D2 Lift Inspector certification process, but with a Government and the DBH failing to acknowledge any support or recognition of the qualification, few retain this certification in the market place. And so the question arises when a glimmer of a more consistent process emerges, who now has the knowledge and experience to competently inspect a lift in NZ? The answer lies in the 20 years of lack of training and certification of lift inspectors in NZ, with the bulk of sound expertise being either past retirement age, or very close to it. And so, just as the void in a consistent and safe process is finally seeing a glimmer of positive improvement, a void in competent inspection is evolving to undermine this allowing ember of promise! Ed.



KONE AND SCHINDLER SETTLE PATENT DISPUTE:

KONE and Inventio AG, a company of the Schindler Group, have signed a settlement agreement regarding Inventio's patent family related to RFID call input technology for elevators, including EP Patent No. 699 617, US Patent No. 5,689,094 and others (the "Patents"). The parties reached the agreement on their dispute over the use of the Patents prior to initiating patent litigation in the matter. The settlement agreement provides KONE a license to use the Patents in its operations worldwide against an agreed consideration. The specific terms of the agreement are confidential.

OTIS NZ SALES RESTRUCTURES:

Without warning South Island and Pacific NE & Mod Sales Consultant **Paul Buckley** was asked to clear his desk as his job was made redundant last month after approximately 4 years in Christchurch office. Paul after a short break is keen to continue his experience in the local lift industry and would be pleased to discuss any options regarding employment. He can be contacted on **021 136 4039**. It is understood that **Niten Gupta** Auckland Sales Manager with **Dave Clarke** South Island Accounts Rep and **Paul Wheeler** Modernisation will head sales.

Lift Preparations During Harsh Weather Seasons:

Schindler US has put together a few tips on how best protect a lift installation during storm surges, and with the changing weather patterns in NZ it may be prudent to consider whether or not they could be useful to your Building Management.

Schindler offers advice to building and facility managers on how to protect elevator equipment and occupants in the event of a storm.

Precautions include helpful safety guidelines for before, during and after inclement weather occurs



CHRISTCHURCH 4th Sept 2012 – During a season in which weather can be potentially hazardous, it's important that building and facility managers take the proper precautions to help prevent elevator damage and protect the safety of building occupants. Schindler Elevator Corporation offers the following tips to consider before, during and after weather-related events. For questions or assistance, customers should contact their elevator service provider for implementation of these and other safety measures.



Initial Preparations

A diagram showing the location of your elevators, car numbers and the elevator car phone number should be in your designated security area. In addition, you should have your elevator company's emergency phone number available along with any required numerical designations.

Before any inclement weather happens, building and facility managers can start by inspecting the elevator machine room's ventilation openings, windows and doors for possible rain leakage. If, during the inspection, water leakage is found, prevent water from reaching electrical panels by installing metal splash guards around ventilation

openings and weather stripping around any machine room doors that open to the outdoors.

Before a Storm Hits

If a storm is near, there are steps that should be taken immediately to prevent damage to elevator equipment. The first step is to close all vents and openings at the top of the hoistway to prevent water from entering the elevator shaft. Next, barricade the machine room, and be sure that no occupants are left in the buildings that are reliant on elevators for egress. "If buildings have elevators that are enclosed, managers should run each car to the center of the building, or to the top floor for two-story buildings," says Josh Elliott, a product line manager at Schindler.

"Elevators exposed to the outdoors should always be run to the floor below the top. After cars are parked appropriately, shut the elevator down with the keyed switch and close the doors to prevent unauthorized personnel from using the equipment. In addition, place the mainline disconnect in the "off" position to completely remove power from the elevator. Schindler personnel can provide assistance if a customer is unsure of what to do."

While parking elevators and preventing unauthorized use is important, preparing for power problems is a necessity. "Since today's elevator equipment is built with so many electrical components, there are emergency systems to become familiar with if there's a need to exit passengers quickly," adds Elliott. "Ensure that the elevator has surge protection or is operating with a reliable emergency power generation system backup, or an emergency return system for hydraulic, machine room-less or traction elevators and make sure emergency lighting and a telephone are operable."

During a Storm and Once it Has Passed

Refrain from using an elevator at all due to the water or wind-driven water that can disable elevators and lead to passenger entrapments.



Once skies are officially clear, check for water on the control panels or in the machine room before restoring power. If water is found, don't resume operation until the elevator service provider provides a thorough inspection.



Because weather conditions can be unpredictable, Schindler recommends facility and building managers take these precautions and set up a process ahead of time in order to secure

safety of the equipment and its occupants. Practice sessions should be conducted during low-demand hours of the elevator system and in the presence of a supervisor within the facility, or trained elevator technician.

LIFT Shaft Safety:

You have probably heard it said that accidents happen, or if you have worked in a dangerous environment but haven't as yet experienced an accident, you may hear "there but for the grace of God go I".

Everyone experiences accidents from which they learn, and I often wonder why I feel the need to say, "I've been fortunate, touch wood". Have I been lucky, or have I just been made aware or learned of both the dangers and precautions necessary to minimize the risks.

The market solution has been to sell us a multitude of protective and hi-viz clothing and accessories, and it is difficult to argue against the fact that it may provide some worth, especially if it at least brings our mind to focus on any dangers within our immediate environment. Sadly, the sales drive has seen such a keenness to adopt its products to "look safe" in every environment; dangerous environments may no longer be so obvious!

From my lifetime experience in the dangerous environments within the lift industry, I have found my early exposure as an apprentice being mentored by a wide variety of experienced persons willing and able to pass on their knowledge, as the most valuable tool in creating my own safe space. I say my own safe space, because risk control is about ownership by you of your immediate environment, and those around you.

The apprenticeship process created the real-life environment in which safe, long-term, one-on-one controlled learning could be transferred from peer to student, such that I feel it is unlikely to be achieved in the classroom today.

L.J. Gooch, A.M.I.E.E stated in the introduction to his experiences on Electric Lifts around the 1930's, fittingly titling his first chapter on 'Accidents', and opened it with the words These words have been with us for quite a while, and any

Accidents to engineers working on lifts are, unfortunately, all too frequent. They are however almost invariably due either to lack of knowledge or carelessness. To carry out almost any work to a lift it is essential for you to have a good "mate," if it is to be carried out with safety! and success.

experienced lift installer or maintenance person will find it hard to disagree them, so why is it that our "safety advisers" in the industry today have succumbed to the financial wizards who promote unsafe single man installation and maintenance in NZ?

Control System - Safe Design:

With the issue of the new **Platforms and Low Speed** lift standard; NZS 4334:2012 in New Zealand, the proliferation of smaller companies producing or manufacturing increasing numbers of this type of equipment for this restricted access market will continue to rise, but is our certification and inspection system up to scratch to ensure a consistent standard of learned fail-safe control design is maintained?

One area I am seeing more of in the drive for low cost, smarter, more flexible control systems, is in the substitution of tried and tested hard wired fail-safe series safety circuit directly controlling drive contactors and valves, being replaced by PLC and Smart relays I/O's directly interfaced to safety field inputs and drive outputs.

Yes this makes wiring simpler and control less costly as well as easier to design and modify, but has any failsafe characteristics for the design been considered, or has total reliance been placed on the reliability of the software and electronic components.

NZS 4334:2012 reflects evolved lift industry safe practice in that it requires in **clause 3.3.5.1(d)** that:- **no single component failure shall result in the start or continued movement of the drive.**

Furthermore in clause 3.3.5.2 it continues by requiring that:- **a safety switch shall be of a fail-safe design whereby any sub-component failure results in an open circuit.**

Clause **3.3.5.3** identified what functions where applicable require to be controlled by safety switches; those being:-

1. A slack suspension rope or chain.
2. A landing door or landing gate, or car door or car gate, open when the lift is outside the unlocking zone.
3. An obstruction encountered by a sensitive surface.
4. Operation of a safety edge.
5. Travel to higher than the top landing.
6. Travel below the bottom landing.
7. Loading of the safety nut of a screw drive.
8. Operation of safety gear.
9. Removal of a guard.
10. Loading of a safety rope or chain.
11. A slack governor switch.

Clause 3.3.4.5 Safety switches also requiring manual resetting are a broken or slack rope or chain switch.

Clause 3.3.5.5 Stop Switches: Any manual operated stop switch shall be included in the safety circuit and shall comply with:-

1. Be of the manually open and closed type.
2. Be capable of being positively opened mechanically and not solely dependent on springs. (No micro-switches).
3. Be conspicuously and permanently marked STOP with both the stop and run positions identified.
4. When opened the switch shall open the control circuit so as to stop the lift **and prevent any power doors from operating.**

Clause 3.3.7 A circuit diagram for the lift control circuit shall be provided that includes full schematic diagrams, logic ladder diagrams and a designation list.

Do your control systems comply?

Determination 2012/033:

In this determination issued on 2nd may 2012 Rotorua District Council decided that a lift size amendment to alteration of an existing two storey NZ Fire service building that changed to a 1.5m x 1.0m platform lift, would not be issued a Consent because of its reduced platform size. The lift was to include a 0.9m wide same side automatic powered entry door with view windows at each level and a side wall mounted control panel.

The conclusion given was a first for NZ in that it recognized that the performance or purpose of the solution as detailed in the Act, took precedence over any prescriptive clause of an acceptable solution that added unnecessary restriction on the submitter.



John Gardiner; Manager Determinations for the DBH, provided the following five reasons for his conclusion.

1. The compliance of the lift must be considered in relation to the building in which it is being used, taking into account the nature of the buildings occupants, the degree to which the proposed lift is able to be used without assistance, and whether a person in a wheelchair can use the lift while permitting an ambulant person to pass.
2. The building is not one that is open to the general public. The building users that are expected to access level 1 in the normal course of events are required to be fully fit: In this instance the stairs provide the primary means of access to level 1.
3. However, there will be occasions when it can reasonably be expected that those with disabilities will require access to and from level 1, therefore the attributes of the proposed 1.1m wide x 1.5m deep lift must be considered against the requirements of clauses D1.3.2 and D1.3.4(b). (see box).
4. I accept that the lift is "low rise. Low speed, and low use". The lift has the attributes of a smaller than 1.4m x 1.4m described in Appendix C of the Disabled Access Standard NZS4121 and must be considered able to be used by wheelchair users. The lift serves two levels only: there will be not conflict between users remaining in the lift and those needing to enter or exit the lift.
5. I conclude that the proposed lift, for use in this particular building, will meet the requirements of Clause D1.3.2 and D1.3.4(b).

And so the Rotorua Councils decision to reject the application was over turned.

LEC Comment:

For too long many people with vested interests along with Councils placing reliance on what can be restrictive D2 prescriptive solutions, have used NZS4121 as the holy grail for guidance on building access solutions, rather than seek experienced D2 opinion based on what needed to be achieved. This simply being; a minimal, flexible, cost effective means of mechanical access.

Until publication of the low-rise, low-speed lift standard NZS 4334:2012 in NZ, all acceptable solutions had been highly prescriptive and based on the mixed traffic passenger lift access solution, that in many instances for low rise 2 and 3 floor building access, is excessive for this purpose.

The Building Act in Clause 18 requires that no building work needs to achieve performance criteria that are additional to; or more restrictive than, the performance criteria prescribed in the building code.

Many overlook this because it takes both a sound knowledge of not only the Building Act and the intentions of the Building Code clause D2, but the evolution and design limitations of the many mechanical means of access in the market place, mostly focused on high rise building access.

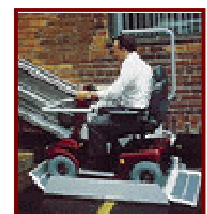
In essence the Disabled Access standard NZS 4121 reflects a single solution for all passenger lifts in NZ, but provides confusion in the area most applicable to disabled access; the low rise, low speed means of mechanical access into buildings. In fact it has stubbornly pursued the view that simpler more flexible dedicated wheelchair access solutions were somehow inadequate because a wheelchair couldn't be turned around in them.



LEC's contention has been that the Building Act was remiss in defining an accessible building as only needing a means of mechanical access where over 400m² or 40 persons on the upper level, as per D1.3.4(c), and in placing the emphasis on NZS 4121 9.2.2.1 as the only acceptable lift car size solution on an accessible route. There are many and varied means of providing suitable mechanical

access into any building in NZ without restriction, and up to 3 levels can be served by dedicated platforms or similar solutions to ensure suitable cost effective access is available to all.

And so **Determination 2012/033**, although guardedly by emphasising in this instance that it only relates to an existing building, last draws attention to [the significance of performance assessment](#) in highlighting the relevant NZBC clauses referenced in its argument, rather than relying fully on the restrictive prescriptive D2 and NZS 4121 acceptable solutions. Ed.



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