



Established in 1974, the objective of the Association is to further and improve Four Wheel Drive activities in New Zealand.

As a member of the NZFWDA, you become an integral part of this effort to ensure that present and future generations can continue to enjoy our country in four wheel drive vehicles.



December 2013 - MARCH 2014

Next issue March 2014 - June 2014

NEWS

General Business discussed at the Executive Meeting 7pm Sunday 24 November 2013 via Skype.

- Conference and AGM 2014
- NZ Walking Access Commission Forum / Mapping system
- DOC (new partnership)
- Database / Website
- United 4WD
- Trail Torque
- Sponsorship
- LVVTA Suspension panel
- Remit to Constitution – Committee Meeting
- New Club Applications:
 - o Desert Defenders
 - o Off Road Aotearoa
 - o Canterbury Four Wheel Drive Club
- Insurance update
- Adventure Activity Regulations
- Update Business Plan
- National Competition Regulations Part One, sections one, three, four, four A, five, six, and seven dated May 1985
- Treadlightly
- Abusive Emails

Next Executive meetings:

Saturday 8th February, Wellington
Sunday 30th March, Skype.

AGM Conference

24 & 25 May, Waipuna Hotel and Conference Centre - 58 Waipuna Rd, Mt Wellington, Auckland.

DISCLAIMER: The opinions expressed in this issue are those of the contributors and not necessarily those of the Association, it's Executive Members or the Trail Torque Editor.

NZFWDA President

Tony Burgess

P: 027 479 2636 ---- E: president@nzfwda.org.nz

Welcome to the latest issue of Trail Torque. The feedback we received from members on our last edition was very positive and also gave us some idea of what the members want from their magazine. We will try to continue to bring you a wide variety of articles in the future including technical articles and features on members and their vehicles and exciting destinations etc. The most important thing to remember is that this is a member's magazine and we need articles from all our members. Lots of other people are interested in your vehicle and what you have done to it and where you have been in it so put "pen to paper" and send in your contribution so that all members get to see what you have been up to. Also if you would like us to include an article on a specific topic let us know, we will do the research and publish the article as soon as we are able.

One topic I am currently researching is measuring of vehicle stability. Ongoing issues with lifted vehicles and the articles elsewhere in Trail Torque by Ken McAdam and Tony Johnson prompted me to have a look at what is happening elsewhere in the world and I have found information on a couple of companies who measure vehicle stability using a GPS sensor attached to each corner of a vehicle. These units can very accurately record the movement of a vehicle over 3 axis and compare it to a set standard. Hopefully there will be some more information that I can bring you



in the next edition.

Also in the next issue I am hoping to bring you an article on a much modified 80 Series LandCruiser called "Halfcut" An amazing vehicle, keep an eye out for it. In addition I am sure that there will be a lot of interesting trips undertaken over the Christmas period and we are very keen to have a report on these trips included in our March issue.

I will be staying close to home this summer and hopefully getting in a few short trips in the Jimny and preparing it for some more challenging trips next year and repairing a few things I have already decided needed upgrading in the few trips I have done, and also start planning for a fundraising event in April next year.

Have a great Christmas and a Happy New Year.

Tony Burgess, NZFWDA President.

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Website: www.nzfwda.org.nz

Facebook: <https://www.facebook.com/NewZealandFourWheelDriveAssociationInc>

NZFWDA Secretary

Kath Jaggard

E: secretary@nzfwda.org.nz



Our greatest love of four wheeling is the opportunity to get out camping and socialising with like-minded four wheelers. Our Club has an annual trip over Labour Weekend to Ahipara (Kaitia) that is one of the highlights of our calendar, usually joining up with the Kaitia Four Wheel Drive Club and any other Club visiting the area to make the trip a more social event. This year Manukau Club came out with us and we all had a brilliant time. The Crunchie Trail is still well worth

a visit with its' washed out sandstone track that leads on to spectacular sand dunes and even better views. When the Jeep Jamborees were happening, Russell and I were part of the team that cleared the tracks and kept participants on the straight and narrow as team leaders. We had some great trips, met some interesting people and generally had a really good time putting our Jeep Cherokee through its paces.

We had the Cherokee for 9 years, modified it with extractors, a lift, snorkel, and other bits. It was the perfect "away from home" vehicle. The saddest day for us was the day that someone else thought they deserved our Cherokee more than we did.

The 2014 Conference / AGM has been confirmed at the Waipuna Lodge in Auckland for the 24th and 25th May 2014. Information packs for that are due out in the New Year.

Work has been done on the Association Database to remove double ups and other anomalies. Please contact me if there are issues that we still need to address and we will work towards correcting them.

On November 24th the Executive held a Skype meeting. The minutes from that meeting will be available shortly, in the meantime, a copy of the Agenda is included in this issue of Trail Torque.

I wish you all a safe and happy Christmas and New Year.
Kath Jaggard, NZFWDA Secretary.

NZFWDA Competitions Officer

Neville Dunton

P: 07 578 2689 ---- M: 027 446 5634 ---- E: nevd@xtra.co.nz



The 2013-14 trials season is now underway with first Round hosted by South Waikato 4WD Club at Okoroire early November.

The South Waikato trial was also a day of sadness for many of us as we were aware Norman Hudson was nearing death; in keeping with Norman's passion for 4 wheeling he chose that day to pass. Norm withdrew from National competitions about 4 years ago and he will be missed. Norman Hudson (1953 – 2013) RIP. Norm put a lot into his dash between those two years.....

Congratulations to Bryce Hunger who took out overall honours at the South

Waikato trial with a total of just 92.8 points. The obstacles were interesting and intermingled with challenging mud. Competition was very close for most of the day with the top five trucks being separated by less than 80 points.

Round 2 was hosted by BOP Club on 8th December following which there is to be a fairly lengthy break until Wanganui Club host Round 3 on 25th January 2014.

There are a number of new trucks this season and the move to Chevy LS engines seems to be gaining momentum! A few more new or rebuilt trucks are also known to be nearing completion so there is bound to be added excitement as the season progresses.

Following on from the NZFWDA's commitment to Drug Free Sport, the Competitions Executive considered existing National Competitions Regulations around prohibition of drugs and alcohol during any event

and agreed this provided a zero tolerance for alcohol (and drugs) for all competitors. The Executive resolved to implement breath testing for alcohol and this decision was ratified by the NZFWDA National Executive. The policy was implemented at the South Waikato trial. Pleasingly there were no failures of the zero tolerance standard and breath testing will continue to be undertaken during future trials.

Overall the National Competitions series remain in good shape; we continue to attract good numbers of entries across most classes of vehicles and there is increasing interest from member Clubs to host future 4x4 trials events. Now is the time for Clubs to consider hosting trials for the 2014-15 season; it would be great to have a full 2015 calendar in place before the end of this season and I encourage Clubs to submit their requests early.

Neville Dunton.
National Competitions Officer.

NZFWDA Northern Zone President

Russell De Luca

P: 07 576 2202 ---- E: nthzpresident@nzfwda.org.nz



We recently welcomed a new 4WD Club to the Northern Zone, being the Port Valley 4x4 Club, based at Kawakawa in the Bay of Islands.

At the last Zone meeting, Dan Barnett gave some background to the

formation of the new Club which has operated as an "informal" group of four-wheelers for the last 6-7 years. The main focus of the Club is on runs for "tough" and competition trucks.

Along with other recreation groups, we made a submission to the Rotorua District Council in respect of obstructions placed by adjoining private landowners which prevented access to three partly formed legal roads within Rotorua District.

We were encouraged by the Council's subsequent decision on the matter which reinforces the public's right of access over such roads and which advises that if necessary appropriate

steps will be taken in the future to ensure such access rights are continued to be preserved.

The Waitawheta 4WD track (south-west of Waihi town) re-opened at Labour Weekend and has already seen a lot of use. The track will be closed again next year over the winter months, from 1 May 2014.

Recent working bees have been undertaken on the 42 Traverse, Maratoto and at Muriwai Beach.

Russell De Luca.
NZFWDA Northern Zone President.

The NZFWDA Executive are volunteers who administer the Association. Divided into three regional zone committees - Northern Zone, Central Zone, Southern Zone and a Competition Committee.

Northern Zone Clubs

Please email Club detail changes to editor@nzfwda.org.nz



4X4 Challenges NZ Inc.

PO Box 37 143, Parnell, Auckland
President Tim Fensom : 027 487 1733
president@4x4challenges.org.nz
Secretary Eileen Austin : eilaustin@xtra.co.nz

4x4challenges.org.nz



Auckland Four Wheel Drive Club Inc.

PO Box 6712 Wellesley St Auckland
President Jack Talbot : 027 224 4215
president@auckland4wd.org.nz
Secretary Peter Vahry : 027 431 0923
secretary@auckland4wd.org.nz
Meet Third Monday of every month at 8pm,
Vintage Car Club, Fairfax Ave, Penrose.

auckland4wd.org.nz

Bay of Islands 4x4 Club

PO Box 443, Kerikeri
President Andrew Graham
Secretary Martin Rivers : 021 293 7215 : mart.rivers@gmail.com



Bay of Plenty Four Wheel Drive Club

P.O.Box 2300, Tauranga
President Dave Smith : 021 100 4023
david394c@gmail.com
Secretary Matt Pennefather : 021 0236 8358
mathew.pennefather@live.com
Meet First Thursday of each month 7.30 pm
Tauranga Sports Fishing Club,
Cross Rd Sulphur Point Marina, Tga.

www.bop4wd.org.nz



Counties 4 Wheelers

PO Box 72 1394, Papakura
President Russell Biggs : 021 935 527
russell@biggsconstruction.co.nz
Secretary Lorraine Chung : 027 242 5968
Lorraine.Chung@asb.co.nz



Cozzie Four Wheelers

PO Box 4133 Hamilton
President Dom Barnes : 027 823 3018
dom@gymcare.co.nz
Secretary John Lisignoli : 021 204 5990
zl2po@xtra.co.nz
Meet Third Tuesday most months, 7.30pm
Hamilton Cosmopolitan Club,
Claudelands.

East Coast Four Wheel Drive Club

PO Box 2180, Gisborne
President Rod Dear : 06 868 4882 : rjandradear@hotmail.com
Secretary Graeme Dearnness : 06 867 8130
graeme@graemesaudio.co.nz



Eastern Bay Twin Diff Club Inc.

PO Box 588, Whakatane 3120
President Ron Sturme : 027 226 7915
r.dsturme@xtra.co.nz
Secretary Kylie Montrose : 07 304 8801
kgwest@xtra.co.nz
Meet First Wednesday of the month,
The Whakatane Club, 84 The Strand.

EBTDCLUB@gmail.com



Geysersland 4WD Club

PO Box 2085, Rotorua
President George Estcourt : 021 338 312
president@geysersland4wd.co.nz
Secretary Marika Fritzsche : 021 053 2555
secretary@geysersland4wd.co.nz
Meet First Wednesday of every month
(except January) 7.30pm at
'Kurious Kiwi', 209 Fenton St.

www.geysersland4wd.co.nz

Road closures:

Thompsons Track, Te Aroha
- 2km from the Thompsons Rd entrance is closed due to forest harvesting activities. Thompsons Track is closed to all traffic and pedestrians during the hours of 7.30am and 3.30pm Monday to Friday, from the 9th until the 20th of December 2013. Please observe all signage that may be on site.

Queries can be directed to:
Forest Owner Marketing Services
Dan Gaddum
Mobile 027 585 9339

An Opportunity to Meet Other Like Minded 4 Wheelers.

The NZFWDA annual conference is an excellent opportunity to mix and mingle with other 4 wheel drive enthusiasts and to gather a vast amount of information on a wide variety of topics of interest to members and is open to all members.

The next conference is to be held on 24 May 2014 at Waipuna Hotel and Conference Centre (58 Waipuna Rd, Mt Wellington, Auckland) on the edge of the Panmure Basin in Auckland. As always there will be a range of interesting guest speakers including technical experts, access specialists, our insurance agent, Department Of Conservation head office recreation advisory Staff, A solicitor talking about the running of clubs. Of special interest this year is Julie Anne Genter (MP and Transport Spokesperson, Green Party of Aotearoa New Zealand) will be addressing the conference on the subject "Is the rising influence of green politics a threat to our recreation?". Julie Anne is a well qualified key note speaker who has presented a large number of high profile address and I am sure that she will present an enlighten address. You can find out more about Julie Anne here. <http://www.julieanne.co.nz/files/CV-Julie-Anne-Genter.pdf>

Don't miss this opportunity to hear a great range of speakers on the 24th May 2014 at Waipuna Hotel and Conference Centre - 58 Waipuna Rd, Mt Wellington, Auckland.

Looking forward to seeing lots of new faces at the conference, Tony Burgess.

Northern Zone Clubs Continued...

Please email Club detail changes to editor@nzfwda.org.nz

Kaitia 4WD Club Inc.

PO Box 125, Kaitia 0441

President Greg Hodgson : 09 409 4167 : greg.barb@xtra.co.nz

Secretary Dave Currie : 09 406 7518

Meet First Monday of the month, 7pm, Kaitia RSA.

kaitia4x4club@hotmail.com



Manukau Four Wheel Drive Club Inc.

PO Box 75-199, Manurewa

President Bernie Konz : 09 236 6856

Secretary Joy Browne : 09 238 7298

Meet First Tuesday of month (except Jan),
7.30pm at South Auckland Car Club,
1R Great South Rd, Papakura.

www.manukau4wd.org.nz



Kauri Coast 4WD Club

PO Box 18, Dargaville

President Fred Worters : 021 135 5570

Secretary Serena Carran : 09 439 0064

kauricoast4wdclub@yahoo.co.nz
Meet Second Wednesday of the month at
7.30pm Northern Wairoa Boating Club

www.kauricoast4wdclub.wikispaces.com



Northland Family Four Wheelers

PO Box 8098 Kensington Whangarei 0145

President Colin Thorburn

nglasgow300@gmail.com

Secretary Brett Hogan : 09 437 7438

onehogan@xtra.co.nz
Meet Second Thursday each Month,
clubrooms in Glenbervie.

www.nffw.net



Land Rover Enthusiasts Club (Rotorua)

PO Box 2113, Rotorua 3040

President Colin Parr : 027 499 6023

partons@xtra.co.nz

Secretary Peter Kelly

peterkellynz@gmail.com

www.lrerot.wikispaces.com



Norwest OHV Club Inc.

PO Box 171, Kumeu Auckland

President Simon Collett

president@norwestohv.org

Secretary Dan Farley

secretary@norwestohv.org

Meet Second Monday of the month, 7.30pm
Paddy's Bar, Shamrock Drive, Kumeu.

www.norwestohv.org



Land Rover Owners Club (Auckland)

PO Box 68 859, Auckland 1145

President Jeremy Bleakley : 021 289 7009

Jeremy@albanyins.co.nz

Secretary Neil Abbott : 021 281 1509

neil.abbott@manumarine.com

Meet First Monday of the month, 7.30pm

Horse & Trap Pub, Enfield St, Mt Eden

www.lroca.org.nz



Port Valley 4x4 Club

President Dan Barnett : dan@drpc.co.nz

Keeping things up to date.

We have received feedback from several members expressing some frustration with the information that is published regarding contact details for Clubs. We take all feedback from members seriously and most important of all, it is vital that people know who to contact within our organisation when they need to so it is important that we get this right.

First of all I need to explain that there is legal control on what we can publish. The Privacy Act requires that we don't share the information we have with anyone else and only use the information for the purpose that we collect it for, and we will never breach those requirements, even if it means that we can't offer the level of service we would like to offer.

There seems to be 3 areas of concern;

- 1) Where NZFWDA sends newsletters and information,
- 2) Club contact information on NZFWDA web site and
- 3) Information published in commercial magazines

The information we collect and use to contact members and clubs comes from a central database. The information is entered into the database by a representative from each Club, and kept up to date by that same person. This is usually the Club Secretary. If you are not receiving Trail Torque or have other problems with the information we have on you, you first need to contact your Club secretary to ensure that the information is correct on the database

that the Club controls.

The Club contact information on the NZFWDA website also comes from the central database, but it is not an automatic function. The database has a section where Club Secretaries can enter details of who holds positions in the clubs, and contact details for these people. Every time a change is made to this information our hard working National Secretary gets an email and makes the changes on the website, but she also has a full time job and a business to run, and doesn't get paid to do NZFWDA work so sometimes there is a delay before she is able to get the information up to date. If the information on the NZFWDA website is out of date, firstly check that the Clubs own information is up to date on the database, and then contact the National Secretary if there is a problem.

The information that is published by commercial magazines doesn't come from NZFWDA. At this stage we don't collect permission to share that information with commercial organisations. We are working on upgrading our systems and process so that we can keep other organisations up to date with Club contact details using details from our database, but at this stage the only option is for each Club to advise each magazine individually of its contact details.

If you need any further information, please don't hesitate to contact me, Tony Burgess, NZFWDA President.

Northern Zone Clubs Continued...

Please email Club detail changes to editor@nzfwda.org.nz



Rodney Off Road Club Inc.

47 John Dee Crescent, Red Beach 0932

President Jimmy Kiddie : 027 222 6366

jimmycando@xtra.co.nz

Secretary Matt Carnell : 029 200 8153

mathias@actrix.co.nz

Meet Second Wednesday of every month,
8pm at the Wade Hotel, Silverdale

www.rodneymoffroadclub.co.nz
rodneymoffroadclub@gmail.com



Shore 4 Wheelers Inc.

PO Box 100-404, NSMC, Auckland

President Kerry Dornbusch : 021 277 6622

nakerz@xtra.co.nz

Secretary Paul Hudson : 09 817 9248

paulhud@xtra.co.nz

Meet Second Wednesday of the month 7pm
at North Shore Rod & Customs Car
Club, 4/26 Hillside Rd, Glenfield.



South Waikato 4WD Club

C/- K Morriss 246 Parapara Rd Tirau 3410

President Craig Tomalin : 027 490 6785

Secretary Karen Morriss : 07 883 1567

Meet First Wednesday of each month
7.30pm at the Tirau Hall.

Sulphur City 4 Wheelers

c/- PO Box 10085, Rotorua 3046

President Steve Wright : 0274 507 990 : jilstev@xtra.co.nz

Secretary Andrew Sutherland : 027 482 1108
utherlandlog@xtra.co.nz



Taupo 4WD Club

PO Box 457, Taupo

President Graeme Wilton : 022 0209935

president@taupo4wd.net

Secretary Simone Dasent : 027 253 3221

info@taupo4wd.net

www.taupo4wd.net



Thames Valley 4WD Club

C/- K. Barriball, Waitakaruru, R.D.6, Thames

President Paul Bax : 027 485 8797

pmadbax@xtra.co.nz

Secretary Keith Barriball : 07 867 3330

buddog@ihug.co.nz

United 4WD supporters

C/- Almara, RD 4, Albany, Auckland

Secretary Carmen Mills : 09 426 8830 : u4wd@nzfwda.org.nz



Waikato Four Wheel Drive Club

PO Box 9313, Hamilton

President Tom Douglas : 07 825 4900

douglasmonks@xtra.co.nz

Secretary Al Laslett : 027 201 0606

alkb75@yahoo.com

Meet Second Thursday of every month 8pm
at the Scouting Hall on Storey Ave.



Whangamata 4x4 Club

PO Box 299 Whangamata

President Graeme King

Secretary Chris Glucina

Meet Second Tuesday at 7:30pm at the
Whangamata Club.

www.whangamata4x4.org Whangamata4x4@gmail.com



Whangarei 4WD Club

P.O.Box 1850, Whangarei

President John Ellis : 09 435 6260

johnellis1@xtra.co.nz

Secretary Kay Ludgate : 09 435 5518

secretary@whangarei4x4.org.nz

Meet Second Tuesday of month at 7.30pm
Kamo Club.

www.whangarei4x4.org

Wilderness Ridge Riders

PO Box 101-910, NSMC, North Shore City

wildernessrr4wd@gmail.com

Central Zone President

Max Wheatley

E: czpresident@nzfwda.org.nz



I have been thinking what to write for this column going forward and I have decided on a mix of news from the Zone meetings and what I have been up to.

National Level

As you should all know by now the National Executive met in Wellington on the 28th of September and I am sure others will cover this meeting in more detail than me. Remember that these minutes of these meetings are available to members either from the web site (<http://nzfwda.org.nz>) or direct from the secretary. You are generally also welcome to attend any of the National Executive meetings, some business you may need to be excluded from and generally you will not have speaking or voting rights.

The last National Executive meeting was on Sunday 24th of November by Skype.

Zone Meeting

Saturday 23rd November was the last meeting of the Central Zone committee. This was attended by only 9 members. When some of our members are making a 6 hour round trip to attend this meeting, this is a little disappointing.

One of the most important things we covered was the admission of 4 new Clubs into the central zone of the New Zealand Four Wheel Drive Association Inc.

Offroad

So where have I been offroad since the last column, no where unfortunately. I was looking forward to a drive around a Club members farm but this was cancelled. I did get to go to the Constructors Car Club show in Wellington, not much for the offroad person but some very clever ideas.

In the workshop.

Not a lot happening there these days but it was time for a WOF on the Discovery. A couple of changes left me wondering if my WOF man would be happy. New headlights, gone are those terrible,

expensive headlights stolen from the Sherpa van parts bin. In went some rectangular ones from a Hiace van (yeah I know but the price was right and they don't have that "T" word on them) quartz halogen, all went well until a couple of days before and then it struck me that they didn't have park lights, who needs park lights anyway, a quick trip to Repco solved that.

With every thing else looking OK off we went, much to my embarrassment I hadn't checked the steering ball joints, the boots were gone and they were very stiff. Oh well I needed to make up a new drag link anyway. So off to Fletcher Steel and \$65 later, I new piece of steel in hand. One phone call and a set of ball joints arrived the next day from LandRover Spares. Come Saturday off with the old one from the Range Rover to use as a pattern (now hopelessly bent out of shape) and off to my mate to cut up a new one. He looks at the old one and says "We can straighten that", and so we did, then a few minutes in the lathe to shorten it a few mm, drill a couple of witness holes and we were away. Yes I did get a WOF.

Always happy to hear from you, I might not always have an answer though.

Max Wheatley.
Central Zone President.

Central Zone Clubs

Please email Club detail changes to editor@nzfwda.org.nz



Capital Cruisers 4WD Club
PO Box 38725, Wellington Mail Centre



Hawkes Bay 4WD Club
PO Box 1423 Hastings
President John Jones : 06 877 5868
jandhjones@xtra.co.nz
Secretary Tracey Moss : 06 877 8400
mossimo764@hotmail.com



Central Districts
PO Box 130 Feilding
President Roger Bird : 06 328 5881
bird@parklee.co.nz
Secretary Nicki Andersen
d4x4club@hotmail.co.nz



King Country 4WD Club
20 Waitataura Road, RD3, Te Kuiti
President Dennis Frankhouser
4wdrulz@clear.net.nz
Secretary Lynne Frankhouser
4wdrulz@clear.net.nz
www.kc4wd.co.nz

Costa Plenty 4x4 Club

c/o P O Box 130 Feilding 4740
President Laurie Goldfinch : 027 246 6133
Secretary Nicki Andersen : costaplenty@hotmail.co.nz



Kiwi 4x4
President Anthony Sayers : 021 989 093
president@kiwi4x4.org.nz
Secretary Reece Hearst : 027 458 9921
secretary@kiwi4x4.org.nz
www.kiwi4x4.org.nz



Cross Country Vehicle Club (Wellington) Inc.
PO Box 38-762, Te Puni, Wellington 5045
President Charles Odlin : codlin@odlin.co.nz
Secretary Terrence Broad :
terrenceandberyl@yahoo.co.nz
Meet Second Wednesday of each month at 7.30pm Petone Working Mens Club, Udy St.

www.ccvc.org.nz

Levin 4WD Club

C/- 32 Greenwood Boulevard, Otaki
President Paul Shivan : 04 904 6872 : pshivan@gmail.com
Secretary Ken Douglas : 027 530 2614 : ken.douglas@xtra.co.nz



Manawatu 4WD Club

PO Box 5176, Terrace End, Palmerston North
President Andrew Francis : 06 376 7128
west.ridge@xtra.co.nz
Secretary Peter Robertson : 06 356 9536
p.r.robertson@infogen.net.nz
Meet Third Wednesday of month at 7.30pm Awapuni Community Centre, Newbury St, Palmerston North

www.m4wdc.org.nz



Feilding 4x4 Club
C/- 39 Seddon Street Feilding 4702
President Myles Norris
Secretary John de Burgh
jdeburgh@ihug.co.nz

www.feilding4x4.org



Central Zone Public Relations Officer

Brent Samson

M: 021 478 633 ---- E: czpro@nzfwda.org.nz



Hi all. It has been a very quiet time for me over the past months.

We had our Central Zone meeting a few weeks ago with very low numbers attending the meeting. Thanks to those who took the time to attend but it would be great to see some more Clubs represented at the meetings.

At the meeting we reviewed applications from three new Clubs from the Central Zone who wished to take up membership of the New Zealand Four Wheel Drive Association Inc.

I attended the first Round of the National Trials series which was a great day hosted by the South Waikato 4WD Club. The trial was run in Tirau. It was an excellent location that resulted in very low scores for the top trucks.

Round 2 was held on 8 December and hosted by the Bay of Plenty 4WD Club. I am also looking forward to the first of the Central Zone Rounds on 25 January, which is being hosted by the Wanganui 4WD Club.

The final two Central Zone Rounds are being hosted by the Valley 4wd Club in Wellington on 16 February and the Manawatu 4WD Club on 16 March. It would be great to see lots of Central Zone Clubs getting in behind the competitors and the Clubs hosting these events. A lot of work goes into running a successful event and the Clubs deserve our support.

Personally, I will have a very busy February as my Club is hosting the Wellington Round and there is a lot to organising to be done.

Brent Samson.
Central Zone PRO.

Central Zone Clubs continued...

Please email Club detail changes to editor@nzfwda.org.nz



Mt Egmont 4 Wheel Drive Club Inc.

PO Box 8014, New Plymouth

President John Jenkins : 021 279 9435

yslaautosport@xtra.co.nz

Secretary Donna Moratti : 06 756 8422

arthur.moratti@xtra.co.nz

Meet Second Monday of Month, 7.30pm at the Inglewood Club.

www.egmont4wd.co.nz



Taranua 4WD Club

PO Box 4 Paraparaumu.

President Brent Gibson : bgibson@qtl.co.nz

Meet Second Tuesday of every month
7.30pm at Paraparaumu RSA

www.taranua4wd.org.nz



Twin City Four Wheel Drive Club

PO Box 5137, Greenmeadows, Napier

President Floyd Du Plessis
floyd2004@hotmail.com

Meet Second Wednesday of each month at
7.30pm, Taradale RSA

www.twincity4x4.co.nz



Offroad Wairarapa 4x4 Club

PO Box 405, Masterton 5840

President Tony Oliver : 027 552 2202

esthero23@xtra.co.nz

Secretary Mike Rolls : 06 370 9328

mikeandlizrolls@xtra.co.nz

Meet Second Tuesday of every month
(except January) at 35 Perry Street,
Masterton 7.30pm

www.orw.org.nz



Valley 4WD Club

13 Lemonwood Grove, Maungaraki

President Brent Samson : 021 478 633

jen_brent@xtra.co.nz

Secretary Neil Blackie : blackie.neil@gmail.com



Taranaki Family 4x4 Club

82 Wallath Rd, New Plymouth

Club Captain Patrick Adams

pro@naki4wd.org

Secretary Anthony Thorpe

exec@naki4wd.org

Meet Last Thursday of every month at
members home, contact
Secretary for more information.

www.naki4wd.org



Windy City Off-Roaders Inc.

c/o Howat Engineering 10 Horlor street,
Naenae, Lower Hutt 5011

President Mark Pincock (Skid)

skiddynz@live.com

Secretary Brian Hutchinson : 04 564 2699

brianhutch1@hotmail.com



Four Wheel Drive Events/Trips/Runs

From the Cape to the Bluff

Email your Club Event to editor@nzfwda.org.nz

All due care has been taken entering these details, NZFWDA cannot take responsibility for any changes or inadvertent inaccuracies. Potential participants should contact the event organiser.

18 - 19 JANUARY 2014

Mapiu School Family Fun 4WD Weekend Safari. King Country 4wd Club, State Highway 4, Mapiu. All inclusive, meals, camping site and Fun for the whole Family. See <http://www.kc4wd.co.nz> for more info.

25 JANUARY 2014

NZFWDA National 4x4 Trials, Round 3 hosted by Wanganui 4WD Club, start 8.30am, 457 Waimutu Road, Turakina. Scrutineering will be held on Friday 24 January 2014 from 5:00pm to 9:00pm at Swartz Tyres Limited, on the corner of Taupo Quay and Pacific Place, Wanganui.

25 JANUARY - 26 JANUARY 2014

Tour de Whanga organised by Whangamata 4WD Club. This is an event set up for the more adventurous safari people. A forest based event using lots of tracks as stages over a 1.5 day event. In the Matariki Forests, we will use the forest roads to get into as much off road tracks as possible. This event is aimed at giving the regular experienced safari/tag-along people or those of you with tuff trucks that would like to take a family member along for an exciting but fun trip.

16 FEBRUARY 2014

NZFWDA National 4x4 Trials. Round 4 hosted by Valley 4WD Club.

1 MARCH - 2 MARCH 2014

4x4 National Park 2014. Series of events to support local organisations. www.4x4nationalpark.co.nz

9 MARCH 2014

Landrover Owners Club (Otago) Inc Rally at their Club grounds Waitati, Dunedin. 4 Classes - Standard, Modified Greater Modified and Super Modified. All Welcome. Accommodation available at Clubrooms for competitors and supporters. For enquires contact Russell 027 222 4879 or rp.quin@xtra.co.nz.

16 MARCH 2014

NZFWDA National 4x4 Trials. Round 5 hosted by Manawatu 4WD Club.

17 MAY 2014

Teams Tour de Whanga. This is an event aimed at the experienced safari guys with a tuff truck mate or for well set up 4x4 trucks. It is along the lines of the January event but staged on more challenging tracks that will require at least 1 winch per team. Each team will be required to complete a set number of stages during the day with points deducted for failure to get all 3 trucks to a stage end. To be held in Matariki Forest blocks organised by Whangamata 4WD Club.

29 MARCH - 30 MARCH 2014

Kauri Coast 4WD Club weekend safari, fundraising for the Northland Rescue Helicopter. Limited to 60 Vehicles \$160 Driver and 1 passenger. Camping available. Contact: Serena Carran 09 439 0064 or 021 159 2720 email: aneres@xnet.co.nz

19 APRIL 2014

NZFWDA National 4x4 Trials. Round 6 (Final). Hosted by Counties 4 Wheelers.



Central Zone Clubs continued...



Wanganui 4WD Club

PO Box 973, Wanganui

President Grant Harrison : 0272 485 943
grant@hiremasterwanganui.co.nz

Secretary Sandra Sarginson : 06 343 7041
sandra.warren@xtra.co.nz

Meet First Tuesday of month, 7.30pm
Wanganui Race Course Purnell St

Wairarapa Four Wheel Drive Club

PO Box 792, Masterton

President Peter Pope : 06 377 1434 : peteshirl@xtra.co.nz

Secretary Julian Rowntree : 06 377 7238 : juliancarol@xtra.co.nz

Meet Last Tuesday of every month 7.30pm at the Masterton Cosmopolitan Club.

Wellington Family 4x4 Club

c/- 38 Bracken Rd, Newlands, Wellington 6037

President Pete Carmichael : daimler350@hotmail.com

Secretary Alan Greeves : 027 448 8014
alan.geeves@slingshot.co.nz

Wellington Jeep Club

PO Box 38203, Wellington Mail Centre

Secretary Warren O'Connor : 04 234 6340 : woconnor@paradise.net.nz

Urewera Safari Cancelled.

The Mahia Hunt Club, bi-annual East Coast Safari held in conjunction with the East Coast Four Wheel Drive Club, which was planned for the 6th - 9th February 2014 has been cancelled due to the new legislation under the Adventure Activities Regulations which comes in to effect on 1st February 2014.

Club Representative Mark Harris says, "I would like to thank all those who have already put a lot of time and effort into preparations over the last four months for what would have been another really good event. Also a big thanks to you who have or were going to register for the event, it is extremely disappointing to have to cancel".

"But it was felt that if we went for a ruling on the legislation and it was slow in being made and came back that we had to cancel, it would have been unfair on you, the participants, to get late notice to change your plans and alter leave that has been applied for".

"We will be giving a full refund of all deposits and Janice Redshaw will let you know how this is best done e.g. return uncashed cheques, direct refund to bank account etc".

"For those entrants who have had their money processed could you please let me know your bank details and we will have the money credited back to your account. Could you please email your details to janredshaw@xtra.co.nz"



National 4x4 Trials Calendar



Round 3; Sat 25th Jan 2014 in the Central Zone hosted by Wanganui 4WD Club.

Round 4; Sun 16th Feb 2014 in the Central Zone hosted by Valley 4WD Club.

Round 5; Sun 16th March 2014, in the Central Zone, hosted by the Manawatu 4WD Club.

Round 6; Saturday 19th April 2014 on Easter Weekend hosted by: Counties 4 Wheelers





Southern Zone President

Russell Quin

P: 03 477 0004 ---- 027 222 4879 ---- E: szpresident@nzfwda.org.nz



Well it has been all go in the South and we could not be accused of being inactive over the last few months.

First I must congratulate John MacDonald for his supreme effort in putting together the Southern Safari. The feed back from the participants and Clubs who helped us with the organising of the trips have been very positive. Like any event run for the first time we all learn and there may be some areas that we can improve and tweak for the next time but overall "fantastic".

I was disappointed to read Phil Hanson's comments in the Petrol

Head mag about the organisational and communication problems he perceived which apart from being factually incorrect about not finishing in Bluff, (he wouldn't have known as he left the trip at Benmore). We have had no adverse comments, other participants most of who attended the dinner at the Ascot Park Hotel, in Invercargill had nothing but praise for the concept and organisation.

Challenge – How about someone in the North Island put together a similar concept. We would be happy to share ideas and provide a blue print to run it.

Three submissions for the Conservation Management Strategies (CMS) for DoC have been submitted for Southland, Otago and Canterbury. These are particularly important documents as they shape the direction and access that DoC afford to four wheel drives on public conservation lands for the next ten years.

We went through a rigorous consultation process with Clubs from all areas in the conversation areas

concerned and pulled together non member Clubs as well to ensure that we were all speaking with a combined voice. This was a good exercise as it gave an opportunity to meet kindred clubs from outside the Association and to share ideas.

I hope that some of you took the opportunity to submit as well using your own submission or the email version we sent to all members.

It will be interesting to see if DoC have taken into account any of our recommendations, I have a feeling that the four wheel drive community probably put in the most submissions. We look forward to March to see what the final document looks like. Thanks to all those who put the time in to attend meetings or submit.

If anyone is interested I am happy to email a copy of our submissions to them.

Russell Quin.
Southern Zone President.

Southern Zone Clubs

Please email Club detail changes to editor@nzfwda.org.nz



4X4 Events Inc

PO Box 13893 Christchurch 8140
President Ash Sergeant : 027 844 1785
prodownhill123@gmail.com
Secretary Sangita Malcolm : 021 216 2112
bowhillroad@hotmail.co.nz
Meet Fourth Thursday of month 7.30pm
at Papanui RSA, 55 Bellvue Ave

www.4x4events.co.nz



Land Rover Enthusiasts Club (Dunedin)

President Noel Harper : 021 454 481
landiman@kinect.co.nz
Secretary Suzanne Bell : 027 489 0584
suzannev.bell@gmail.com
Meet Second Wednesday each month 8pm
Robbies Bar & Grill South Dunedin

www.lrec.co.nz



Landrover Owners Club (Otago) Inc

PO Box 47 Dunedin
President Michael Adam : 03 454 5467
Secretary Russell Quin : 03 477 0004
russell.quin@spicers.co.nz
Meet First Wednesday of the month 7.30pm
at Hurricane Rodders Inc
51 Victoria Rd, Dunedin

www.lroco.com



Marlborough 4WD Club

PO Box 519 Blenheim
President Trevor Jamie : 03 572 5385
Marl4x4@slingshot.co.nz
Secretary Helen Horton : 03 577 8480

www.marlborough4x4club.weebly.com

Clutha 4WD Club

P O Box 22 Balclutha 9240
Secretary Michael Sutherland : 027 446 5070
michael.sutherland@farmside.co.nz

Central Otago 4WD Club

P.O Box 314 Alexandra 9340
President Rodney Mason : 03 445 4750 : co4wdc@gmail.com
Secretary Curtis Crawford : 03 446 9068 : co4wdc@gmail.com



Southern Zone Public Relations Officer

John MacDonald

E: szpro@nzfwda.org.nz



The last couple of months have been very busy for us in the South Island, we have had three Department of Conservation, Conservancy Management Strategy (CMS) to put submissions in on.

I setup and ran the Southern Safari, with the help of the Southern Zone (SZ) Clubs and it was very successful.

I had three goals;
to get the SZ Clubs working together,
to get to know SZ Club members and
I wanted to do a 4x4 trip from Picton to Bluff, all achieved.

At the moment I am working on marking up the Walking Access Mapping System (WAMS) with all the 4x4 tracks that have free public access.

So far I have identified the tracks in my area, but I need input from you all to cover all of NZ. I have applied to be a partner of the WAMS which will allow us to put the data on their web site www.wams.org.nz. I suspect this is going to be a big project but I will keep you up to date with our progress.

My next Southern Zone 4x4 trip will be a Mid Winter trip in the Canterbury High Country. It is still in the planning stage, but it will be up the Rakia and Rangitata Rivers between 29th June 6th July 2014.

These are big rivers with lots of boulders, deep water and maybe even snow that time of year, so it is only recommended for a well setup Club truck.

We will be staying at the Potts and Glenthorn Lodges so it will be comfortable and warm at night. I hope to have all the details sorted out by early in the New Year, when I will send a flyer out to everyone in the Association.

John MacDonald.
Southern Zone PRO.

Southern Zone Clubs continued...

Please email Club detail changes to editor@nzfwda.org.nz



Mid-Canterbury Four Wheel Drive Club Inc.
PO Box 327 Ashburton

President Stan Van Heeswyck : 027 555 8855
president@ash4x4.co.nz

Secretary Abby Calder : 03 307 7120
secretary@ash4x4.co.nz

Meet Last Thursday of the month, 8pm at
Club Rooms, Tinwald Domain,
Maronan Rd, Ashburton.

www.ash4x4.co.nz



Shotover 4WD Club

PO Box 1503, Queenstown

President Nick Hazlett : 021 176 0766
president@shotover4wdclub.co.nz

Secretary Leigh Carppe
secretary@shotover4wdclub.co.nz

Meet First Wednesday of the month
7.30pm at St John Ambulance
Rooms, Douglas St, Frankton,
Queenstown.

www.shotover4wdclub.co.nz



Nelson 4 Wheel Drive Club Inc.

PO Box 228 Nelson 7040

President Tracy McCrenor : tracy@4wdnz.net

Secretary Alf Russell : alf@4wdnz.net

Meet First Wednesday of the month at
Suburban Club, Tahunanui 8 pm.
(except January)

www.4wdnz.net

Otago Recreational 4WD Group

12 Byron Street, Mornington, Dunedin 9011

President Graeme Thompson : 027 483 4285

Graeme.Thompson@otagodhb.govt.nz

Secretary Greg Carroll : 03 486 1733 : gregc5nz@gmail.com

www.or4g.org.nz

South Island Deaf 4x4 Club

c/- 6 Bellina Place Broomfield, Christchurch

President John Witchall : 021 048 5349

s.i.deaf4x4club@hotmail.com

Secretary Irene Weir : 027 579 487 (text only)

s.i.deaf4x4club@hotmail.com

South Island Niva Drivers Association (SINDA)

PO Box 34 Christchurch

Secretary Greg Barclay : tzoperations@coincascade.co.nz

Meet Third Wednesday of the month at Papanui RSA,
Harewood Road, Christchurch at 7.30pm



Gordy Turn on the Nevis Rd.

We hatched a plan as you do, in the pub over a few beers. We wanted to do a 4x4 trip down the South Island, the problem was we didn't know where to go, we reckoned if we got the Clubs involved it would be doable. When I contacted the Clubs they were happy to help so it was all on. I sent a flyer out on the 1st August and by the 2nd, the trip was full, it looked like a lot of other people wanted to do the trip also.

On Monday 28th October everyone arrived at Spring Creek, the kicking off point for the Southern Safari. The week before we had miserable weather, so you can imagine my delight when it was a beautiful clear day. The



Lake Opoha



Old Man Range



Top of Raglan Range

Marlborough 4WD Club had planned to take us up onto Mt Patriarch, but since we had to cross the Wairau River and it was in flood the plan had to change, so we went up onto the Raglan Range instead. The storms that had flooded the river had also dumped fresh snow on the tops and at nearly 1500m we were on the tops. To me it was funny the South Islanders were all in shorts and the North Islanders were in longs, shivering. It didn't really matter, like big kid's soon everyone was tossing snowballs at each other. That was going to be hard to beat, but the next day the Nelson Club took us up onto Mt Murchison at 1469m, the air was cool and crystal clear and you could see all the way to Nelson. I bet Kodak would have been rubbing their hands together.

By the time we got to Reefton our luck with the weather had changed and it was pouring down, the SINDA Club had planned to take us up the Waipuna Creek to Napoleon Hill and it was in flood, so it was decided that only vehicles with snorkels (something that is standard in the South Island) could come. As it turned out that was a very wise decision, as the water was up over the bonnet many times.

The next day the rain had cleared up and we headed for Noname Rd then over the hills to Canterbury, where we were greeted with rain, hail, thunder and lightning, nice. But the next day it had cleared up and we



The Waipina



Tim in the Waipuna caves

had another fantastic day. The Mid-Canterbury Club took us over the Clayton Pack Track. We climbed up through the forest to pop out of the trees to a spectacular view over South Canterbury and Mackenzie Country. That night we ended up on the shores of Lake Benmore at Black Forest Station and were treated to a spectacular view of Mt Cook in the setting sun.

The Otago Recreational 4WD Group took us up onto Mt Buster, an old gold mining area. The first thing you come across is one of the mining sites, a huge area of cream rock tailings and not much else. We then headed over the vast Hawkburn Range, the area is now under DoC's management and they have allowed 4x4 access to the area. The old timers that spent their life working up there must have been tough, it was spring and the sun was out but in the winter it must have been bleak, there isn't much shelter, no trees, just tussock, rock and snow.

The next day we went up onto the Old Man Range. At 1695m we were the highest we had been on the trip and again the weather was spectacular, not a cloud in the sky and crystal clear air. The week before the Club spent most

of the day just getting through the snow to the Obelisk, but by the time we got there most of it had gone. Looking for a bit of a challenge, Lindsay the trip leader, decided to take a side track. But he didn't get far, belied in the snow just a few yards from the main track and needing rescue. Just goes to show if you were up here on your own you could get into a lot of trouble very fast.

The next highlight was the Pisa Range north of Cromwell, the day wasn't that great with low cloud and looking like it was going to rain. With nothing else to do the Landrover Owners Club (Otago) took us out to Lowburn then onto farm tracks to Mt Michael, we climbed up and up with the cloud above us and then guess what? The next thing we were in it, with huge rock popping out of the fog either side of the track. As we descended down the other side we popped out of the cloud again to find the upper Roaring Meg power station, we checked out the station and then headed for the zig zag back up onto Mt Michael. At 260m on the Kawarau Gorge Rd we climbed to round 1100m, zig zaging up the face of the mountain, it was easy enough for the short wheel base trucks but the long wheel base had a bit more of a challenge.



Oreti Beach

The next day the Land Rover Enthusiasts Club (Dunedin) meet us at the camping ground. The plan was to head up to Carricktown then up onto the Duffers Saddle and down the Nevis Road to Garston. Well that was the plan and after a little tiki tour round Bannockburn we found the track and it required every millimetre of articulation my truck had to get up it.

The plan for the last day was to take the Borland Rd in to Lake Manapouri then down to Oreti Beach, the beach made famous by Burt Munro, but at the last minute a contractor working on the road cancelled access to the Borland Rd. Our luck with the weather had run out also, so pouring with rain we took the back roads to Manapouri and then onto Tuatapere, from there we went to Riverton

and west end of Oreti Beach at Riverton. We all started out cruising down the flat sandy beach very PC, but it didn't take long before the race was on. There are quite a few streams along the beach and if you aren't paying attention you can hit them quite fast and instantly your visibility is gone. The beach was a fantastic way to finish a fantastic trip, but it was getting late so we left the beach behind and headed for Bluff and to have our photos taken under the obligatory AA sign.

A trip like this is only possible with the help and support of the Clubs, so I would like to make a special thanks to Trevor & his team from the Marlborough Clubs, Ian & Jim from the Nelson Club, Nico & his team from the SINDA Club, Stan & Colin from the Mid-Canterbury 4x4 Club, Bob & team from the Land Rover Owners Club Otago, Lindsay & his team from the Otago Recreational 4WD Group and Noel & his team from the Land Rover Enthusiasts Club Dunedin. Without all the work they did this trip wasn't possible. Thanks.

John McDonald
Southern Zone PRO



The Nevis Rd

White Star Station Trip

Tony Burgess



Having spent a lot of time tramping around the Coromandel Peninsula in my youth, but now not quite so athletic, I am always keen to get back into the coromandels by vehicle, so when the opportunity to visit White Star Station came up I was the first to put my name on the list.

White Star station is one and a half hours driving time from Thames and 30 minutes north of Coromandel Township, near Colville and at 1,260 hectares is one of the largest properties on the Coromandel Peninsula. The Evans family has farmed on the property since 1864 (6 generations). Zane and Ngaire continue to manage the property, with help from sons Karl, Matthew and daughter Belinda.

We left home just after lunch on Friday with the Jimny on the trailer towed by our Grand Cherokee Ltd. This was the first time we had used the Jeep as a serious tow vehicle and the first real trip for the Jimny as well, so we were interested in the performance of both vehicles, as well as the history and sights of the local area.

After a leisurely trip down from Auckland, including a stop at Thames for supplies and afternoon tea and a bit of local site seeing at Coromandel we arrived at White Star in plenty of time for dinner, very happy with the performance of the Jeep on some big climbs with the trailer in tow. The yanks certainly know how to build a vehicle with plenty

of power and I found the power of the big V8 a welcome change from the Japanese oil burners I had been driving for the last few years. Not so keen on the fuel bill.

Accommodation at White Star includes a backpacker's house, on-site caravans, bush lodges and self-contained 2 or 3 bedroom motel-style houses and camping, but we had got in early and booked the 2 bedroom house.

The house was very clean and comfortable with all the modern amenities. We used the microwave to cook dinner while watching telly, and greeting later arrivals who had dinner on the trip down before settling down for a very comfortable nights sleep.

As well as sheep and cattle farming, activities on the farm include horse trekking, range-top walks, and bush walks to waterfalls, and visitors can also become involved in the running of the farm if they wish, and I understand that this is very popular with the kids. We were very privileged to be permitted to use our vehicles on the property which is not normally open to 4x4 vehicles and after a short morning briefing 9 vehicles set off on the day's trip.

The route took us through the farm via a very picturesque farm track alongside a small stream before starting to climb towards the main divide. The track here



On the ridge line

is well metalled but is reasonably steep with several switchbacks and plenty of pot holes. The Jimny performed well climbing the hills with ease, despite oversize tyres and no changes to the factory low range gearing.

First stop was to view an old mine shaft a short walk off the track. Most members walked the short distance to the mine shaft, but a few decided that the short, but steep walk was better left to others while they keep guard on the vehicles. I am not sure who they needed to guard the vehicles against, but that is what they claimed they were doing. The mine was best viewed with a torch, but can be explored without one as it has two entrances allowing some light into most parts of the mine.

The next stop was at the top of the main divide and magnificent weather allowed most of us to take in the scenery and we were able to see both Coromandel Harbour on the west coast and Kennedy Bay on the east coast. Sadly Colin missed the view due to having to change a tyre.



Magnificent beach

After a short diversion to the northern boundary of the property, we turned south roughly following the boundary between White Star Farm and DoC land. By now the main land use had changed from farming to forestry and the track which was mostly broken rock now become steeper in places. The Jimny was still going strong, but the lack of very low gearing meant that I had to drive some of the steeper sections somewhat faster than the Patrols and LandCruisers I was following. We managed to find a very scenic spot for lunch overlooking Kennedy Bay along this part of the track, which eventually passed through regenerating native bush.

Eventually we came out to the Kennedy Bay Road and took the opportunity to drive down the road to Kennedy Bay, finding a way onto the beach. Once on the beach the two Wendys were first to have a paddle in the crystal clear water, closely followed by the kids. Magnificent beach this one, and hardly a soul on it, except a lone fisherman on a quad bike and a couple of fisherpersons arriving in kayaks.

We returned to the track entrance via the site of a communications tower which was also a lookout point 557M above sea level with stunning 360 degree views, but I wouldn't like to be there on a wet and windy day. There is just enough room for 9 vehicles at the top, any more and someone would have to back down the steep, narrow, winding access track. Fortunately that was exactly the number of vehicles we had and everyone was able to park, and then turn around for the decent back to the road.

After unlocking the gate, we returned the way we had come, stopping on the way to explore a few of the mines beside the track, and there are lots of them. We counted no less than 17 that were visible through the bush as we drove past but didn't have time to explore them all.

The ones we did explore contained some very impressive cave wetas, which may explain why a couple of the blokes not normally known for their athletic ability made



such a hasty exit from the caves. One cave even had some most unusual frogs living in them and I suspect that some also contained glow worms, but, of course, they didn't show up under the torch light.

After turning onto a different track we visited another communications tower with more great views of the Peninsula and returned to the accommodation via a forestry and farm track. Nothing too challenging for the vehicles at any stage, but a great day out with plenty of scenery.

The evening could have been spent at the local restaurant which serves a selection of pizza and chips, but we all chose to self cater and spend the evening yarning and socialising.

Sunday again dawned bright and clear, many of the group got away early so that they could visit Driving Creek Railway on the way home, but we chose to have a bit of a sleep in and have a little shopping expedition in Coromandel township and stop at all the small bays along the way and take a few pictures.

All things considered it was a great weekend away, the Jeep went better than expected, the Jimny performed as I expected and (for a change) never let me down, and we were home mid afternoon.

There is one more track that crosses from White Star Station to the east coast that we are yet to explore so we are already looking forward to the next trip. Maybe that will happen before the end of summer. Tony Burgess.

For Sale



4 X 4 Suzuki Speights Buggy, Competitive D Class truck and stands out in the crowd. Used to be a LJ 80 but now very modified for NZ National 4x4 trials but also a great Club truck. The main mods are Nissan 3L V6 petrol motor with Toyota SC14 super charger, Nissan auto, Hilux 3.9 ratio diffs front and rear with redline oil, coil suspension all round, 2 x air diff locks, 4 x skid steer brakes, Disk brakes front and rear, Hydraulic ram steering with hydraulic orbital steering box. Bucket seats with 4 point harness - 3 inch wide seat belts, 6 point roll cage to comp spec, Optima battery, comes with Kumho 833 tyres 35" x 12.5" x 15". Loads of other goodies done to this buggy. Heaps of spare parts. Redline oil in the diffs. Only been used 2 times in the last 3 years so time to sell and make room for new projects. This truck was built to fit 35 inch wheels cost approx \$40,000 to build. Personalised plates NOT included in sale. Contact Dwayne 021 467 885 evenings. **\$14000**



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To advertise your four wheel drive bits, pieces or whole vehicles, please email editor@nzfwda.org.nz

NZFWDA Kids Page

Can you spot the five differences between these photos?



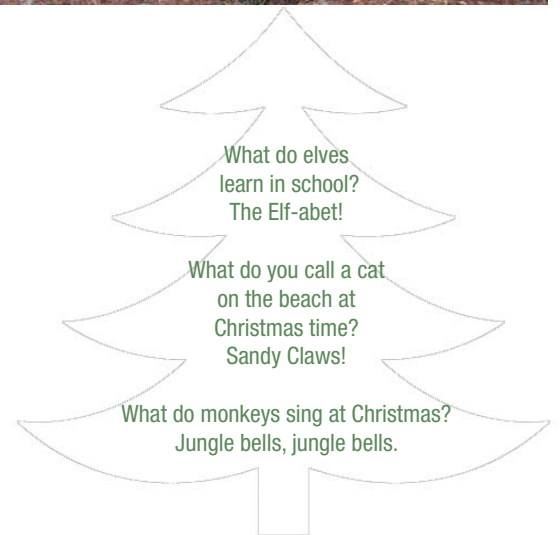
Did you know..

A snail can sleep for 3 years.

Did you know you share your birthday with at least 9 other million people in the world

Riddles...

1. What starts with an e but only has a single letter in it?
2. What has wheels and flies, but is not an aircraft?
3. What word looks the same upside down and backwards?



Riddle Answers: 1. An envelope. 2. A rubbish truck. 3. SWIMS

Spot the difference answers: 1 - Bunting is longer. 2 - New tree appears near finish box. 3 - Third stripe appears on orange fluoro jacket sleeve. 4 - Video man turns around. 5 - Winchman's left gaffer changes colour.

Top Outdoor Spot Competition

The Top Outdoor Spot competition will be back in 2014, giving students the chance to share photos and short stories about their favourite outdoor places for the chance to win.

The educational competition is being run in term 1 on the curriculum-aligned "Both Sides of the Fence" website, developed by the New Zealand Walking Access Commission.

The site encourages primary and intermediate school students to think critically about responsible behaviour in the outdoors and the value of outdoor access to New Zealand's national identity. It supports English and Social Sciences learning areas and EOTC activities, including school camps and field trips.

Students can enter the competition, with help from a teacher, by submitting a photo of their favourite outdoor spot and a short description about what makes it special

to the "In My Region" image gallery on the Both Sides of the Fence site.

The students who send in the "Best Photo" and "Best Description" will each win a Dash 20L day pack for themselves and a \$100 book voucher for their schools.

All photos and descriptions sent in between 27 January 2014 and the end of the day on 14 March 2014 will be in to win.

To find out about the winning students and entries from last year, read the 'Talented students win Top Outdoor Spot competition' article on the New Zealand Walking Access Commission's website.
<http://www.walkingaccess.govt.nz/>

For more information about the Top Outdoor Spot competition visit: <http://bothsidesofthefence.org.nz/>



Raising the Hard Questions

From Tony Johnson, Chief Executive Officer, Low Volume Vehicle Technical Association (LVVTA)

Times are a-changin' – especially for those who like to ride higher than the rest. Although we don't yet know just how these changes will look when they happen next year, we can at least share an overview of why the subject of raised four-wheelers has come under the spot-light, explain what the challenges have been during the process of working out how best to deal with them, and offer an insight into the different ideas currently under discussion.

Firstly, what is LVVTA, and what does it do?

An abridged answer to a complex question is that LVVTA is an incorporated society, established over 20 years ago by 10 different hobbyist national bodies, including Motorsport NZ, NZ Hot Rod Association, Sports Car Club of NZ, Motor Caravan Association, and NZ Four Wheel Drive Association (NZFWDA). The principle objective of LVVTA is to advocate the motor vehicle hobby in New Zealand to the Government, specifically in relation to motor vehicle modification and construction.

LVVTA's role, in the simplest of terms, is to sit in-between the Government and all denominations of motor vehicle enthusiasts, and broker - via the development of sensible and practically-oriented technical requirements and a thorough certification inspection system - an environment that both sides can live with. We do this by attempting to find that delicate balance-point between allowing enthusiasts to build and modify cars with sufficient freedom, flexibility, and creativity that they can continue to enjoy their hobby, whilst ensuring that the system is sufficiently robust to be considered reasonable and acceptable to the Government by virtue of minimising any resultant risk to road safety.

The day that the Government loses confidence in LVVTA and the self-governance system that we have (unique in the world) is the day that a Government-run alternative methodology will be applied here in New Zealand, such as that which exists in many states of Australia. We are therefore strongly compelled to protect our privileged position by taking our responsibilities very seriously.

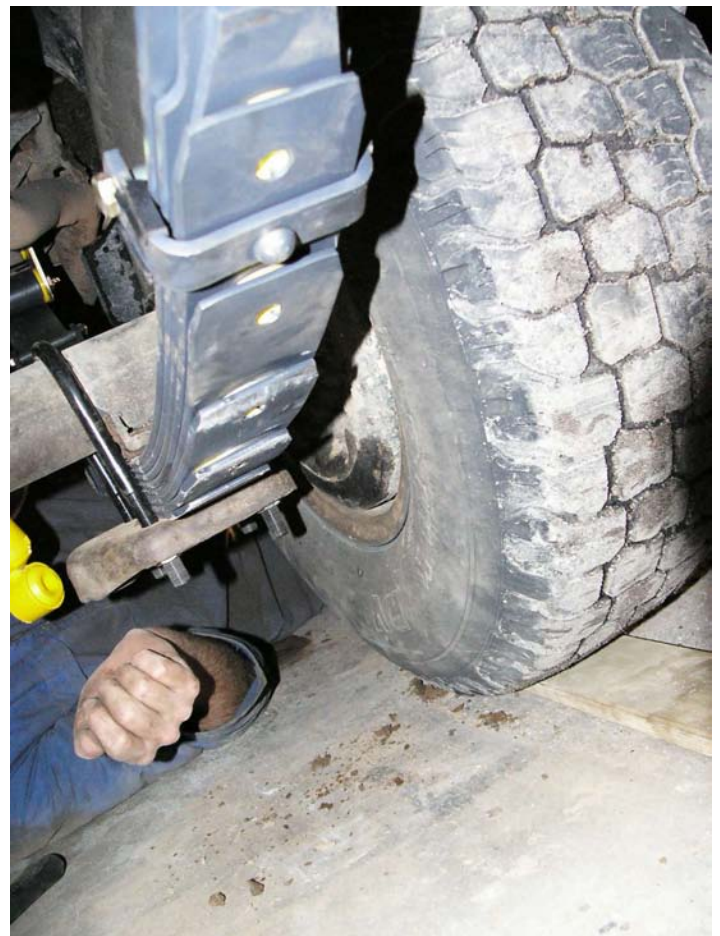
The physics of raised vehicles

Despite differing opinions from some off road enthusiasts, there is a very real safety risk associated with raising the height of a motor vehicle. Whether a vehicle is raised via a body lift, suspension lift, increased tyre circumference, or a combination of two or three of those systems, the bottom line remains that the vehicle has been raised, which increases the vehicle's centre of gravity, which in turn reduces the stability of the vehicle – or more correctly, decreases the speed at which (with any given suspension design or spring rate) the vehicle will roll over.

We've heard it said many times by enthusiastic owners, and even some LVV Certifiers, that the combination of increased spring height through a lift of some sort, and increased spring rate (stiffer springs) has made a vehicle handle 'much better'. This is true to an extent,

insofar as the increased stiffness will decrease the suspension compression and extension during cornering, and therefore reduce 'body roll', which makes a vehicle tend to sit 'flatter' in corners. However, you can't overcome the simple physics of inertia and gravity. A raised vehicle's reduced stability is still lurking behind the feeling that the vehicle handles better - masked by the flatter cornering experienced during the speeds and cornering forces that the vehicle can cope with during normal driving - but at a certain point the reduced stability created by the higher centre of gravity will still cause the vehicle to roll, where it wouldn't have rolled at its standard height. That window of inertia between the point at which a standard vehicle will roll and a raised vehicle will roll may be minimal, but the point is that – regardless of how well a raised vehicle responds whilst in its operating comfort zone – its stability has been reduced, and it is less safe than a standard vehicle in an emergency response situation.

Associated with this handling issue is that, even amongst experienced drivers – off-roaders and LVV Certifiers alike – there is a wide variance of expertise and competence behind the wheel, and what one person declares to be a good handling vehicle, is declared by another to be rubbish. We've seen this before, where the opinion of an LVV Certifier with 20 years of circuit racing experience on a vehicle's handling characteristics is quite different than another LVV Certifier who doesn't have that background.



Why is LVVTA looking at raised vehicles?

The subject of raised vehicles has made its way to the top of LVVTA's to-do pile (along with many other issues being worked on simultaneously) because of the growing trend in recent years toward people creating road-going 'big-foots' or 'monster trucks'. The issue is exacerbated by the fact that a large proportion of these people are not off-road enthusiasts at all and are only interested in mimicking the rugged off-road 'look' for their urban commuters. With this trend comes increasing concerns about the safety of raised vehicles.

Again, advocates for raised vehicles claim that there are no statistics to support any need to look at them, but there are two counter-points to that position. One is that there have been a number of incidents and accidents where people have been injured or killed as a result of unstable (or less stable) 4WD vehicles, some on-road and some off-road – in fact the only segment of the vehicle modification hobby in which there has been more accidents is the 'boy racer' or 'performance import' sector.

The second counterpoint to the position that we should only look where the dead bodies are stacking up, is that LVVTA's philosophy on such matters has always been to identify, address, and mitigate a potential safety risk before a particular modification trend begins to feature disproportionately in accident statistics, rather than reacting to the issue after it has happened. We know from both history and common-sense that being proactive and putting a sensible fix to a potential problem before it gets a chance to become a high-profile incident prevents a media-fuelled knee-jerk over-reaction, so the end outcome is a much better long-term situation for the affected people. And we might save a life or two by taking a safety-based approach.

An additional side-issue with raised vehicles is the extremely adverse effect that a significantly-raised vehicle will have upon any 'normal height' vehicle with which it might collide. Vehicles with extreme lifts in some cases cause the chassis rail height to be up around the windscreen height of a normal passenger car, and this presents what many people consider to be an unacceptable safety risk for other road users, especially occupants of modern 'normal height' vehicles which are already at a major disadvantage mass-wise in the event of a collision (head-on or side-on) with something like a Nissan Patrol.

How LVV Certifiers see the raised vehicle situation

Many of the people who are calling for technical requirements to be put in place to govern or limit the raising of vehicles are very experienced and competent LVV Certifiers. These are the guys who see them and drive them, but maintain the objectivity about them which can sometimes be lacking amongst those who are passionate about such vehicles. The common view we hear from the LVV Certifiers is that, when presented with a vehicle with an extreme lift, they have major concerns with the way in which the vehicle performs as a result of compromises made in relation to the vehicles' steering geometry and suspension geometry, braking performance, and the overall stability issue discussed earlier.

The LVV Certifiers often say they believe that the vehicles may be safe in the hands of an experienced off



roader who understands the characteristics and limitations of the vehicle, but questions the safety of the vehicle in the hands of an inexperienced driver – and we all know how often Joe Average driver gets himself into trouble in a vehicle with a high centre of gravity. These are by far the largest group of vehicles involved in single-vehicle accidents.

There is another problem that keeps on cropping up with raised vehicles, which continually gives LVVTA headaches. Whereas a group of LVV Certifiers around New Zealand will (usually) agree on any given technical subject or vehicle-related technical problem, and carry out their LVV certification inspections with a reasonable degree of consistency from Whangarei to Invercargill, in the case of raised vehicles, LVVTA is constantly experiencing dramatically differing opinions over the same vehicle, or vehicle type, amongst equally experienced and competent LVV Certifiers. This LVV Certifier will say that he is entirely happy with the way that this raised vehicle drives, whereas that LVV Certifier will point-blank refuse to pass the same vehicle on the grounds that it is inherently less safe to drive than what it was when in its original condition. A big part of the reason for this lack of consistency is the simple difficulty in determining what is and isn't 'safe' in terms of handling and stability of a raised vehicle, and the absence of a set of clearly prescribed technical requirements for the LVV Certifiers to apply.

The LVV Authority Card proposal

So, how best to assess such vehicles, and determine what is and isn't safe? The initial thought was, based on a view that the risks associated with raised vehicles are lower whilst driven by off-road enthusiasts, were to create a three-tier system based on: - one; setting a basic 'threshold' that allows a vehicle with a very minor

suspension and/or tyre lift to be able to be assessed by a WoF inspector without LVV certification being required, and two; a set of LVV technical requirements that say that any vehicle that is raised beyond that 'threshold', but less than a safe and sensible specified maximum amount, may be approved (for any vehicle owner/operator) by the LVV certification process, and three; any vehicle that is raised to such an extent that it exceeds the maximum specified figure may be approved (up to a higher maximum limit) by the LVV certification process provided that it can be established that the user is a bonafide enthusiast who understands the limitations and risks associated with a significantly raised vehicle.

The way in which we proposed to identify a distinction between an urban commuter-type operator and a genuine enthusiast is via an existing system that has worked well for the motorsport and hot rodding movements for 20-plus years, which is based around an 'LVV Authority Card' system, which is tied to a certain person who must be a member of a member club of a national association (which must be an LVVTA Member Association) which will monitor and take responsibility for the behaviour of the card-holders via their national club structure so as to prevent the LVV Authority Card system being abused and falling into disrepute.

Unfortunately, this concept – which had been agreed in principle between LVVTA, the New Zealand

Transport Agency (NZTA), and NZFWDA after a lot of time and effort was put into the project – met with disapproval by some Canterbury-based off-roading clubs who were not member clubs of NZFWDA. The Canterbury-based clubs had a number of different reasons for working against the idea, and a common theme seemed to be unwillingness to have membership with NZFWDA as well as their own club or association. Some members lobbied their concerns about the LVV Authority Card system to NZTA, and this caused NZTA to withdraw their support for the LVV Authority Card concept.

The net result of the affected clubs and associations being unable to work together for the greater good – as the motorsport and hot rodding fraternities have done successfully for over 20 years – is that the LVV Authority Card option is now dead in the water, and will not be re-visited. Many off-road enthusiasts view this outcome as a lost opportunity.

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In response to Tony Johnson's article (above) regarding modified Suspension, I would like to make it clear that New Zealand Four Wheel Drive Association (NZFWDA) fully supports the position outlined by Tony Johnson in the article and has done everything it possibly could to meet the concerns of the Canterbury based Clubs and individuals who objected to the Authority Card proposal.

While it appears to be general opinion in Canterbury that the Authority Card was something that NZFWDA asked for, that couldn't be further from the truth. It was an offer made to us by NZTA, and it was a "take it or leave it" option. In other words, we took up the offer for an Authority Card, or we took our chances with whatever was imposed on us. The main conditions NZTA put on it was that it was for members only. We would have been remiss in not taking up the offer on behalf of our members and are very grateful to NZTA and LVVTA for the offer.

During the debate over Authority Cards we repeated our earlier offer to Combined 4WD Clubs to set up a 4th zone in the Canterbury / Nelson region specifically to accommodate the Clubs in that area if sufficient Clubs in the area became members of NZFWDA. This would have resulted in the members having access to the Authority Card system, greater access to our funding, two seats on the National Exec and therefore a real voice within NZFWDA, and still have autonomy

within NZFWDA along with their own elected Zone President and funding. It seemed to us to be an excellent option for everyone, but as far as I am aware the offer was never even put to the members of combined 4WD Clubs. I know that both my predecessor and I offered to travel to Christchurch to discuss it with members but the offer was never taken up. I also understand that there was some very bad blood with some of our Executive many years ago, but those people have been off our Exec for several years and have little or no influence on our current policies or management. I am also aware that one of the loudest voices objecting to the Authority Card proposal was a member of NZFWDA, and would therefore have been eligible for an Authority Card, but had commercial interests that may have been affected by the proposal.

NZFWDA is committed to having the best possible outcome for all concerned and believes the best outcome can only come with a culture of moderation by all parties concerned and we will do everything we can, within the bounds of what authorities will allow us to do. Our door is always open to membership by individual people and Clubs who want to support our aim of promoting the best outcomes possible for everyone involved in our recreation and sport.

Tony Burgess
NZFWDA President.



Raising the Hard Questions continued...

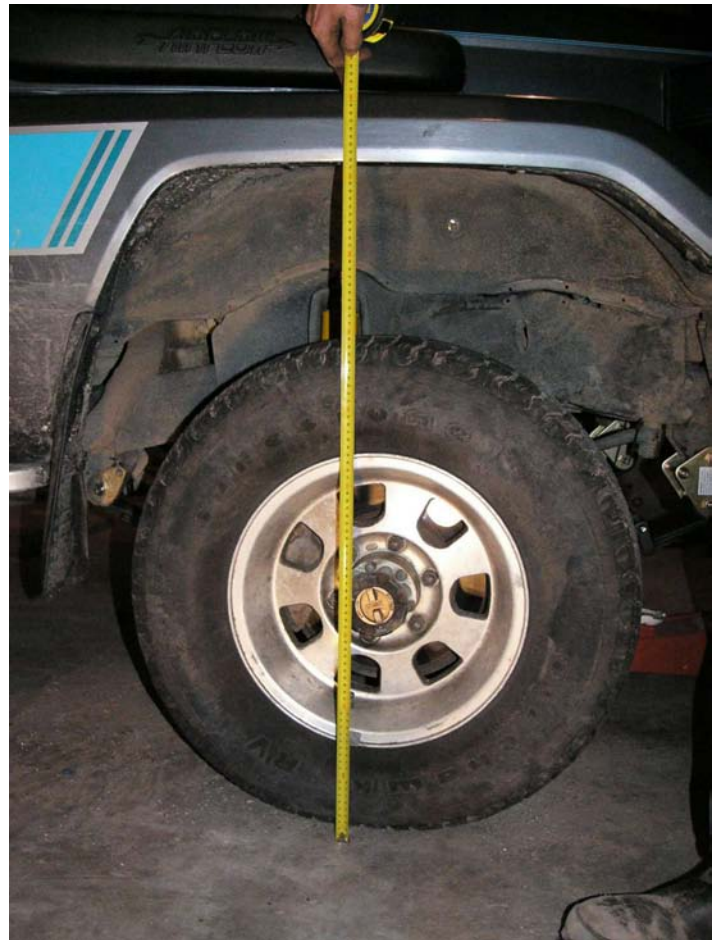
From Tony Johnson, Chief Executive Officer, Low Volume Vehicle Technical Association (LVVTA)

As said earlier, times are a-changin' – especially for those who like to ride higher than the rest. So far in this two-part look at the big question of how raised four-wheelers are to be dealt with, we provided a basic overview of what LVVTA is and what it does, the physics of raised vehicles, an explanation of why raised vehicles are under the spotlight, how LVV Certifiers see the raised vehicle situation, and finally, the LVV Authority Card system proposal that appeared to be a good solution for genuine enthusiasts but which died a painful death on the blood-stained battle-field of inter-association politics. This month we look forward at the new ideas and options on the table, and explain where we go to from here...

Setting simple maximum height figures

With the LVV Authority Card system no longer an option, the simple solution for providing sound technical requirements to ensure that raised vehicles remain within safe and sensible limits might, on the surface, appear to be setting some maximum figures beyond which a vehicle cannot be raised. Some enthusiasts advocate setting a figure such as vehicles lifted by 50 mm or less can be issued a WoF without LVV certification, and vehicles that are lifted by more than 50 mm being required to undergo LVV certification with the LVV certification process allowing a maximum figure of 100 mm. Or in other words, you can go up to 50 mm above OE without LVV certification, and up to 100 mm above OE with LVV certification. End of story. However, this is not a technically sound way to deal with the problem; - any experienced off-roader who has driven a lot of 4WD vehicles both on-road and off-road will tell you that there are some vehicles which are safe to operate with a 100 mm lift, perhaps more, whereas there are other vehicles, particularly small 4WD vehicles that already have stability problems in as-manufactured condition – to the extent that some would describe them as unsafe to drive – that could become even more unsafe with as little as a 20 mm lift.

The NZ Four Wheel Drive Association (NZFWDA) did some good work many years ago that for various reasons never quite gained traction, that takes this basic notion of setting some figures, but they established a series of figures that vary, dependent on the tare, or 'curb weight' (aka 'kurb weight') of the vehicle being assessed. NZFWDA proposed that the maximum unladen chassis height (measured from ground level to a specified point on the underside of the vehicle's chassis or sub-frame rail) could be, say, 350 mm on vehicles with an OEM curb weight of up to 1400 Kg; 380 mm for vehicles of 1400 to 1900 Kg; 420 mm on vehicles of 1900 to 2400 Kg; and 460 mm on vehicles of over 2400 Kg. Although the numbers might need to be fiddled with to get the best result, there is obvious merit in the concept. This at least takes into account that it would be reasonable to assume that the greater the vehicle mass the higher it could be safely lifted, but it doesn't make any distinction between expert off-road vehicle users and the urban commuters, nor does it provide a performance-based outcome for vehicles on an individual basis.



If the ideal solution was determined to be a simple numbers-based regime, something like the NZFWDA proposal could be workable, but as time goes by and more ideas surface on ways to carry out a performance-based test – which, it has to be said, would have to be the best way forward if there is a way of doing it that is practical, achievable, safe, and cost-effective – then the less likely it seems that some simple numbers will provide the best safety-based solution.

There's also a strong argument to say that for any increase in centre of gravity there should be a corresponding increase in track to mitigate the effects of the raised centre of gravity. Then of course, if the track is increased by additional wheel offset or wheel-to-hub spacers in order to resolve the stability problem, a whole new set of problems is potentially introduced as a result of the wheel offset or spacers, such as increased loadings on wheel studs, wheel bearings, and the adverse effects of incorrect scrub radius geometry. Nothing's easy, is it!

Alternative performance-based assessment options

So, each vehicle is going to have to be assessed via either a simple measurement-based set of parameters (as outlined above), or a performance-based test.

With a performance-based assessment now seeming like the best way forward (with emphasis on the fact that a measurement-based system hasn't been discounted, and the proviso that a performance-based

test will only be the solution if it can be carried out in a practical, achievable, safe, and cost-effective way), LVVTA is now considering a number of different options by which to assess the stability-performance of each raised vehicle. All of these options will incorporate the common theme that the same assessment process, and technical requirements, will be applied to all vehicle owners, whether the owner is an urban commuter or a genuine off-roader. The technical requirements will be based on the simple principle that such vehicles must be safe for all vehicle owners, regardless of driving skill level and experience. The stability issues that form a big component of LVVTA's concerns could be addressed by any one, or combination of, the following four assessment processes:

Tip-table test

Option one is to assess a vehicle's stability via a physical static roll-over test, sometimes known as a 'tip-table test', which requires a tilting ramp to which a vehicle could be tied. This system doesn't take into account factors such as axle roll stiffness, tyre grip, and dynamic behaviour of the vehicle, so it has its technical shortcomings. More pertinently, this option isn't really viable because of the access to such a ramp (or cost of building a ramp) for each of the 40 or so LVV Certifiers spread around New Zealand, the risk of harm to the LVV Certifier or damage to the vehicle if something goes wrong with the process, and the high certification costs associated with all of the time involved for the LVV Certifier in carrying out the testing. It would be fine if someone were to build a production run of 20 vehicles and they were all to be assessed in the same way at the same place, but the reality is that in almost all cases, the assessment process will be required on a one-off basis.

Accelerometer-based computer programme

Option 2 is based on Christchurch-based Frank Hassam's idea of assessing a vehicle's stability by carrying out a low-speed slalom driving test over a prescribed course and at a specified speed, using a G-sensor type of accelerometer-based computer programme. This idea might sound a bit far-fetched to some, but initial discussions with computer programmers have determined this could be within the realms of possibility, and it could be as simple as modifying an existing programme or developing a new purpose-built programme, both of which could be used as a smart-phone application. Other experts, however, suggest that there could be complications with this system, as a straight accelerometer set up won't identify the difference between changes in 'roll' and 'direction' during the leaning and turning involved during the slalom test. Having said that, technology is changing rapidly and it could be do-able soon if not already.

Static roll-over threshold

Option 3 is to look at the 'static rollover threshold' (SRT) assessment system that NZTA use for the heavy transport sector. The same issues and concerns exist within the heavy truck fleet, particularly when a heavy load is positioned high within a truck's load area. The SRT system takes into account wheel track, load height and load weight, and a series of mathematical calculations will provide a figure that determines whether or not the vehicle can be legally operated – provided of course that the correct assumptions are made and the correct information

is entered to begin with. The advantages with this system is that it is a tried and tested process that is known to work well, and there doesn't seem to be any reason why it couldn't be modified or adapted to suit smaller 4WD type vehicles.

Load-cell test

Option 4 is an idea offered up by Jason Marsden of Christchurch who has a Physics degree to support his thinking on the subject. Jason's idea is another type of static roll-over test which makes use of digital scales or load cells fitted under each wheel. One side of the vehicle is jacked up, and the weight transfer is used to extrapolate a tip angle, which will work for any vehicle regardless of size, weight, or wheel track. This mathematically-based process works on the principle that just before a vehicle tips over there is zero weight on the underside of the 'uphill' wheels, but calculations can be used to add a safety margin so the vehicle doesn't actually go anywhere near the tipping point. The downside of this system is that, while the process would probably be simple, safe, and accurate, there would be costs of somewhere between \$1000 and \$2000 for the required equipment. LVV Certifiers won't want to be subjected to high expenses unless there is going to be sufficient LVV certification work of this type to make the costs of the equipment economically-viable.

The positive aspect of any of these performance-based stability assessments is that the requirements can be less prescriptive, meaning that there may be no need to limit the amount by which a vehicle is raised, at least in relation to stability. The problems introduced as a result of the raised chassis height however – such as the impact point with other vehicles, and the changes in relationship between steering and suspension angles - are another separate set of technical challenge which, conversely, might mean that limitations are none-the-less required despite positive results from a stability test process.

The next steps

After talking about the issue on and off for over ten years, LVVTA has made a commitment to deal with the raised vehicle issue as a top priority in 2014.

Each year, in addition to the six regional training sessions for LVV Certifiers held throughout New Zealand in April and October of each year, LVVTA now holds a centralised category-based, or subject-based, mid-year training session at its Wellington offices each year. In 2012 the subject was electric vehicles, this year the topic was trikes, and for 2014 the subject will be raised vehicles - or more specifically, a two-day technical workshop will be held on the subject of safety-related technical requirements and stability assessment for raised 4WDs.

LVVTA will invite selected hobbyist and industry experts in the field of modified 4WD vehicles, who are considered to have particular expertise in the areas of steering and suspension geometry, and stability, to participate in the technical workshop. The participants will be limited to around 15 people from throughout New Zealand, and the criteria LVVTA will be using to determine who will be invited is that the invitees will have a very strong technical knowledge, vast practical experience,

can respect the opinion of others, can work well in a group environment, and – most importantly - will not be motivated by any political or commercial agendas.

The objective of the workshop will be to establish the best way forward in terms of dealing with raised 4WDs, and will focus on determining the preferred method of stability assessment including how the preferred assessment process will work at the ground floor from the LVV Certifiers' perspective, and to agree on a series of technical requirements that will ensure a safe inspection process for all of the typical modifications made to these vehicles. The technical decisions made will ultimately form a series of technical requirements that will be incorporated as a separate section in LVV Standard 195 (Suspension Systems), and this in turn will form the basis of the requirements within the inspection form-set that the LVV Certifiers use to assess each raised 4WD that they LVV certify.

If anyone has an interest in attending this workshop and they are confident that they fit the criteria detailed above, they are most welcome to register an expression of interest to Linda Washington at linda@lvvta.org.nz.

In summary

As time goes by and drafts of the new requirements are developed, they will be made available for viewing and downloading free of charge by anyone, on LVVTA's website www.lvvta.org.nz. Any significant steps forward on this subject will be reported in NZ 4WD Magazine during 2014, and LVVTA is always keen to receive positive and constructive feedback from anyone with a technical interest.

This is a complex problem with no simple answers, and LVVTA must, as always, walk that tightrope of trying to provide enthusiasts with as much freedom and flexibility as possible, whilst at the same time ensuring that safety for the vehicle occupants and other road users is not unreasonably reduced or compromised. It's not always an easy balance, but as always, we'll listen to anyone with a constructive opinion, and do our very best to achieve a workable and satisfactory outcome for the hobby, and the associated industry.

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As Tony Johnson has pointed out in his article, raising vehicle height safely is a complex problem with no easy solutions. Vehicle manufactures spend millions of dollars getting their vehicles to handle safely and it is not a simple task to change what the manufactures have developed without having some detrimental effects which may not show up in simple testing and could have fatal consequences later. Therefore it is tremendously important that any testing that is done is accurate and valid. Like any scientific testing, any test that only tests part of the solution is not a valid test and should not be considered a final solution.

The problem we now have is that all of the solutions suggested so far only test part of the problem. Simple tilt table or load cell testing tests the center of gravity, which is an important factor, but doesn't test the performance of the suspension, so gives no real indication how the vehicle will handle at speed should it hit a pothole in the road. The same applies to calculating Static roll-over threshold. In the case of heavy trucks, the suspension of each vehicle is generally reasonably similar and it is reasonable to assume that suspension performance will be similar on similar vehicles, therefore static roll over is a valid test.

The problem with modified 4x4 vehicles is that suspension is often very different to what was on the vehicle when it rolled off the factory floor so no assumptions can be made as to how it will perform. Low speed testing using Accelerometer-based testing has some validity but only tests the suspension performance at low speed, and suspension performance is not necessarily linear. Predictions on how the suspension will perform at 100Kph cannot be based on how the suspension performs at 30Kph as many things will change as components reach the limits of their performance at higher speeds.

This is however not an uncommon problem

worldwide and there is an ISO standard for vehicle stability that is widely used in Europe which includes a testing system that has been shown to be accurate and valid. As a result of a high profile campervan accident the same ISO standard system is now being tested on campervans in Australia. The system comprises of a GPS receiver mounted in each corner of the vehicle and connected to a lap top computer in the vehicle. This allows very accurate measurement and recording of the movement of the vehicle, including pitch, roll, slew and slip at any speed which can then be compared to a set standard for that type of vehicle. I understand that a very similar system is used in testing high performance race cars, helicopters and jet packs. The equipment required is readily available in Australia and I understand at least one unit is in New Zealand, but I have been unable to find out who owns that unit so I have not personally seen it in action but all indications are that it works well and will do exactly what we need. The problem here is cost. The basic unit is \$10,000 and the more advanced units about double that, not including the robot driver that is required to fully meet the ISO standard and the operators require training on using the system. This cost is most likely beyond the reach of most LVV certifiers, and probably not economic for any business to set up, given the reasonably small number of vehicle owners that would be prepared to spend the money to have this testing done. Where does' that leave us? With a big problem which will need to be considered very carefully. NZFWDA is committed to doing everything it can to ensure that anyone who modifies a vehicle as a recreational pursuit is allowed to drive that vehicle on the road, but this cannot be done by compromising road safety.

*Its going to be a very interesting process.
Tony Burgess, NZFWDA President.*



LVV and Raising the Height of Your 4WD

Ken McAdam LVVTA Delegate for NZFWDA

Due to other issues coming up over the last few months, LVV have had to put off the planned November workshop to look at the issues surrounding raising a vehicle. It is currently envisaged that the workshop will be held in May or June of 2014. In the interim the following points need to be kept in mind if you are planning to raise your four wheel drive.

Modifications that do not require LVV certification...

Wheels and Tyres

(Taken from Tyres, Wheels and Hubs section 10 of the VIRM)

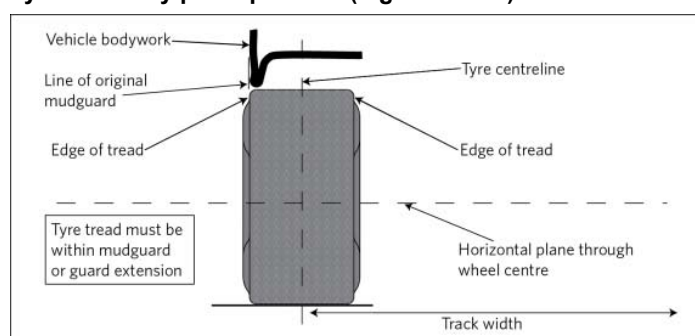
Fitting of or modification to: Aftermarket wheel fitments¹
LVV certification is not required provided that:

- the wheels:
 - are of a known and reputable brand, and
 - would be considered an appropriate fitment for the vehicle type by the wheel manufacturer, and
 - are not modified, and
 - do not have spacers or adaptors fitted.
- the tyre tread:
 - does not protrude beyond the unmodified original body panels (including unmodified factory-fitted mudguard extensions), or
 - protrudes beyond the unmodified original body panels, but is covered by aftermarket or modified mudguard extensions or modified body panels, and the track width has increased by no more than 25mm from OE.

Fitting of or modification to: Tyre size changes
LVV certification is not required provided that:

- the tyres:
 - have an outer circumference that is no more than 5% greater than OE, and
 - are an appropriate selection for rim width, and
 - have tread that does not extend beyond the original or modified body panels or guard extension (see Figure 10-1-1).

Tyre and body panel position (Figure 10-1-1)



SOURCE: <http://vehicleinspection.nzta.govt.nz/virms/in-service-wof/general/tyres,-wheels-and-hubs/tyres-and-wheels#figure1011>

¹ The vehicle inspector may refer the vehicle to an LVV certifier if the inspector has reasonable concerns that the safety of the vehicle has been affected by an aftermarket wheel fitment.

Suspension

(Taken from Steering and Suspension section 9 of the VIRM)

Fitting of or modification to: Springs and shock absorbers

LVV certification is not required provided that:

- the springs or shock absorbers are direct replacements, and
- replacement springs are contained within unmodified OE seats throughout full suspension travel, and
- replacement springs are self-retaining in their seats at full extension, without the use of non-standard devices such as wire-ties, straps, or external spring locators, and
- replacement springs have not been heated or cut, and
- springs and spring seats are not height adjustable by any means (unless OE), and
- replacement shock absorbers, including air-adjustable units, fit unmodified OE mountings, and
- suspension maintains sufficient travel for safe operation when fully laden, and
- suspension components maintain sufficient clearance from unmodified bumpstops when fully laden, and
- a minimum of 100mm ground clearance (unladen and without driver) exists below any part of the vehicle structure, or any steering, braking or suspension component², and
- the normal relationship between front and rear suspension height is not unduly affected.

² Does not include such items as exhaust pipes and exterior body panels that do not contribute to the structural strength of the vehicle.

Fitting of or modification to: Blocks for leaf springs to adjust their ride height (up or down)

LVV certification is not required provided that:

- the suspension has not been raised by any other means, and
- the blocks are:
 - securely fitted, and
 - constructed from metal, and
 - designed for the purpose, and
 - firmly seated over not less than the OE seat area, and
 - not more than 50mm in height.

Body Lift

(Taken from Structure - Section 3 of the VIRM)

Note 7:

A body lift on a body/chassis vehicle (commonly a 4x4) always requires LVV certification.

Once the vehicle is required to have Low Volume Vehicle Certification you need to keep in mind the following LVV Standards:

- Braking Systems Standard, 35-00
- Suspension Systems 195-00
- Wheels and Tyres, 205-00 and the Information Sheet Info 01-2009 Tyre Size to Rim Size Compatibility Guide (V2, released August 2010).

These documents can be found at <http://www.lvvt.org.nz/documents.html#standards>

There is no one standard that can be looked at in regard to Body Lifts but there are a lot of things the certifier needs to take into account when inspecting a vehicle with a Body Lift. The certifier is required to access this against all the affected LVV standards and the requirements contained within the Hobby car Technical Manual.

For example

Steering, what has happened to column and box alignment, is the steering shafts clearing the body, Does the steering incorporate a rubber coupling (as these are not allowed to be used to effect a change in direction/ angle) does the slip joint and or clamps retain enough spline engagement.

Brakes, how are the brake pipes secured and or lengthened? Do the flexible hoses retain enough slack at full drop of the suspension and through steering lock to lock.

Body Lift blocks/spacers. Is the method used to lift the vehicle suitable for the style of body mount? Is it supported across a large enough area to prevent cracking or point loading? Is the attachment system suitable for the lift and style of the mount? Has it been lifted high enough to require diagonal bracing or gusseting?

Vehicle stability and handling characteristics on a road test

There is also a section in the LVV code that says Modifications must be carried out in a tradesman like manner and under the General Safety requirements must be fit for purpose.

This is by no means a complete list but just an example of some of the things a certifier has to consider when looking at a Body Lift.

Some additional points to note:

Suspension- 2.4 Road-test requirements for suspension systems

2.4(1) All modified production low volume vehicles with modified suspension systems must perform in a manner which preserves at least the quality of steering control which could be reasonably expected when the vehicle was originally manufactured.

2.4(3) All low volume vehicles must handle in a manner which allows good steering control in all normal driving conditions, including:

- a) well controlled ride on uneven surfaces without excessive pitch movement, or direction change upon full suspension compression; and
- b) progressive and positive feel with no kick-back through the steering wheel during turn-in and turn-out; and
- c) no excessive under-steer or over-steer tendencies during constant radius cornering, including when encountering mid-corner bump disturbances; and
- d) directional stability with immediate self-centring after sharp minor steering inputs; and
- e) immediate and easy controllability when encountering direction change as a result of road camber changes or surface irregularities; and
- f) no tendency to climb the road camber toward the opposing lane.

Brakes-

- (a) modified production low volume vehicles which have attained an increase in engine power output from the original vehicle manufacturer's specifications of between 20% and 50%, or have any modifications to the service brake system, or have any modifications which result in a change in or relocation of weight or centre of gravity, must achieve:
 - (i) 3 consecutive cycles from 100 kph to standstill each at an average deceleration of not less than 0.65G; and
 - (ii) within a total time of 2 minutes from the start of the first cycle to the completion of the third cycle; or
- (b) all scratch-built low volume vehicles, and modified production low volume vehicles which have attained an increase in engine power output from the original vehicle manufacturer's specifications of more than 50%, must achieve:
 - (i) 5 consecutive cycles from 100 kph to standstill each at an average deceleration of not less than 0.65G; and
 - (ii) within a total time of 3 minutes from the start of the first cycle to the completion of the fifth cycle.

2.4 (3) Low volume vehicles tested in accordance with 2.4(2)(a) must be retested against the requirements specified in 2.4(2)(b), if the vehicle either:

- (a) exhibits during the test any significant decrease in brakefade resistance between cycles; or
- (b) has, in the opinion of the certifier, braking componentry which may not be of sufficient durability relative to the performance potential or mass of the vehicle.

Because of the rolling mass and extra leverage from a 35 inch tyre it can prove very hard to meet the requirement of the brake test without modifying the brake system considerably.

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