It is recommended that field trip leaders discuss latest regulations with Transit or a traffic management consultant as these rules may change from time to time.

All district/city and Transit roads require people working within the road reserve (fence to fence, or 5 m from the edge of the road but outside of the live lane) to have and be using properly a Traffic Management Plan (TMP) that has been approved by a Road Controlling Authority (RCA) (see http://www.transit.govt.nz/technical/copttm.jsp for more information).

Different categories of roads exist; each road category has a different level of compliance associated with it. The field trip leader should find out what category the road belongs to at the place where the field trip stop is planned (see http://www.transit.govt.nz/technical/copttm/signs.jsp#Levels ).

Level 2 and 3 roads should be avoided (roads with >10,000 vehicles per day) Permission is required from Transit & they have high compliance regulations.

The following applies to Level 1 and Level LV roads:

- All roadside stops must follow a TMP that has been designed by a Site Traffic Management Supervisor (STMS) and signed off by the RCA.
  - The trip leader does not have to be an STMS but must find someone with the STMS qualification to design the TMP.
  - At all stops a Traffic Controller (TC) or STMS must be present. If there is not a TC or STMS already participating in the field trip that is willing to take responsibility, then a TC or STMS will need to be found.
  - For Level LV sites, a TC or an STMS is required on site; if only a TC is on site then an STMS must within 60 minutes travel time of the site.
  - For Level 1 sites, a TC or an STMS is required on site; if only a TC is on site then an STMS must within 30 minutes travel time of the site.
  - Most field trip stops will be a “Road Inspection Activity” according to the Transit NZ Code of Practice for Temporary Management Traffic Management. See section D7.2 of the Code of Practice for Temporary Traffic Management Manual (http://www.transit.govt.nz/technical/copttm.jsp)
  - Provided the field trip participants are not in the live lane of traffic, the following requirements will generally need to be met: (although this is not a complete list, each RCA may have different levels of compliance):
    1. The drivers of vehicles approaching the inspection activity must have at least Clear Sight Distance Visibility to it (e.g. for a road with a permanent speed limit of 70 km/h the Clear Sight Distance required is 3 x 70 = 210 m.
    2. A vehicle must be parked clear of the carriageway at the inspection activity site fitted with:
       - One or two amber or yellow rotating flashing beacons, and
       - A rear mounted sign indicating the type of activity taking place (a ROAD INSPECTION sign is most appropriate).
If field trip leaders have problems undertaking the requirements of the Transit NZ Code of Practice for Temporary Management Traffic Management, they should inform GSNZ, or the conference field trip organiser. Some earth science organisations, such as GNS Science, have staff members with the appropriate certification to undertake roles such as TC and STMS. GSNZ may be able to help trip leaders locate a TC or STMS.

In cases where a TC or STMS cannot be found to participate in a field trip, the field trip costs may have to include hiring such a person or alternative stops will need to be found.

The following additional safety measures must also be in place:

- Road cones used to give drivers additional advanced warning.
- Hi Viz jackets/vests must be worn at all times by the field trip participants.
- Before leaving safe parking the field trip leader or the TC must remind all participants of the potential hazards and the need for constant vigilance.

It is recommended that field trip leaders use the checklist below to help set up a roadside stop.
### Roadside stop checklist, hazard assessment and TMP revision form

| Locality: | Date of visit: |
| Grid reference: | Road Owner: |
| TC name: | STMS name: |
| STMS on site?: | (only an STMS can revise a TMP) |

#### Prep
- At start of trip, forewarn participants of the special H&S procedures at roadcuts, especially instructions to other drivers (eg need for drive-throughs, parking off live lane etc)
- You should probably take 2 signs with stands/fixings, 2-3 beacons, 1-3 cones, radios, vests, hard hats, vests, your pre-approved TMP
- Battery-powered beacons are good to use if vehicles are out of sight (you don't need to leave the key in the ignition); also saves vehicle battery from going flat

#### Setup
- Drive through(s) to assess layout options before stopping to set up
- Is the site already subject to a TMP - approval obtained/inducted?
- Site fits standard Transit layout? eg 300 m vis if 100 kph
- Vehicles parked off live lanes?
- Exit vehicles on off-road side (if possible), with hi-vis vests already on and done up
- Tell participants to wait in or beside vehicles, off live lanes, until after setup and safety brief
- Time start:
- STMS does revised TMP (good to involve TC)
- STMS and TC list hazards
- Ask TC to help set up site (use hand-held radios?)
- Nominate someone to monitor safety and compliance while STMS & TC go to set up site
- STMS and TC regroup, confirm hazards list, brief all participants
- Explain the need for a dedicated spotter if on live lane & stop will be <30 minutes

#### End
- Ensure participants are at or in vehicles while site is packed up
- Time end:

#### Hazards
- Does everyone know who has had first aid training, where the first aid kit is, where the satellite phone is (and how to use it) and where the nearest Emergency Medical Department is?

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traffic</td>
<td>Briefing, hi-vis vests, spotters</td>
</tr>
<tr>
<td>Rockfall</td>
<td>Hard hats provided?</td>
</tr>
<tr>
<td>Cliff/bank collapse</td>
<td>Avoid vertical faces if possible, limit time, no hammering</td>
</tr>
<tr>
<td>Slippery surfaces etc</td>
<td>Appropriate footware or NoGo, assess runout/consequences,</td>
</tr>
<tr>
<td>Fences helpers</td>
<td>Beware barbs, electric fences (use gates, cross at strainers,</td>
</tr>
<tr>
<td>Livestock young</td>
<td>Keep clear if concerned, beware of livestock protecting their</td>
</tr>
<tr>
<td>Vegetation in drought</td>
<td>Beware nettles, pines blow over in wind, gums drop branches</td>
</tr>
<tr>
<td>Waves</td>
<td>Throw rope, spotter</td>
</tr>
<tr>
<td>Tsunami</td>
<td>Spotter - sea retreat (may occur without foreshock)</td>
</tr>
</tbody>
</table>
☐ **Machinery** Keep clear, ensure operator can see you
☐ **Eye damage** Safety glasses or don't hammer brittle rocks
☐ **Insects** Concentrations of bees/wasps in the area? Known allergies?
☐ **Other hazards:** 

**No Go areas are:**

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**Sketch your revised TMP here if site does not fit your pre-approved, generic TMP**

Note approximate dimensions and spacings (and directions)

Mark positions of hazards and outcrops

- Cone
- TW sign
- Vehicle
- Beacon