



A basic principle of contaminated land & introduction to consultant reports

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Overview

- The source – pathway – receptor relationship;
- The different stages [types] of contaminated site reporting we receive, review and have to assess.



Sources of contamination



Gas works waste



Sheep dips



Petrol station & workshop



Malicious dumping



Landfill

We'll consider more possible sources of contamination when we discuss the MfE Hazardous Activities and Industries List [HAIL]



Pathways





Receptors

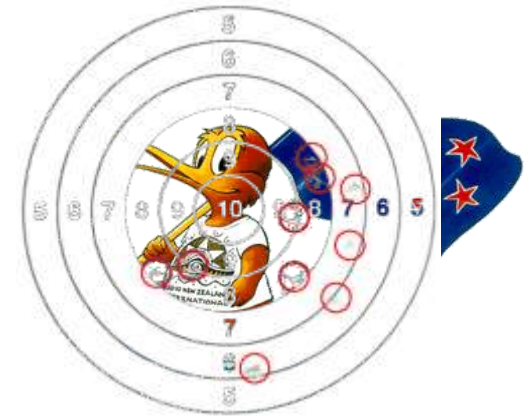


Flowing ground water





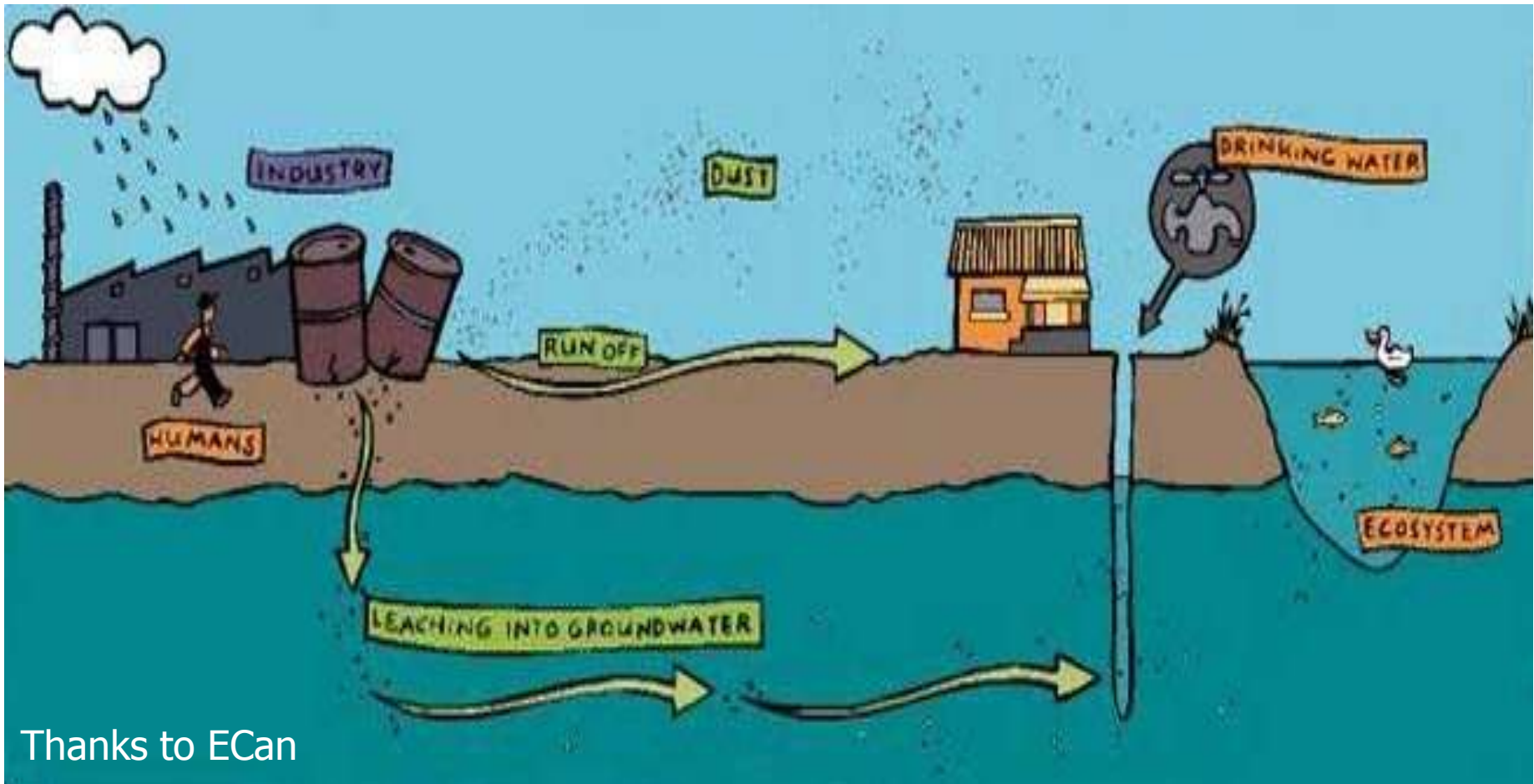
- You need all three to be present in the relationship to have a potential risk that warrants further consideration.



- Remember the *status quo* can change – consider future changes in land use at and around the contamination.



- Or to put it more formally:



Thanks to ECan



Types of contaminated land report

- From MfE CLMG #1, these are:
 1. Preliminary site investigation [~desk study];
 2. Detailed site investigation;
 3. Remediation action plan;
 4. Validation;
 5. Ongoing monitoring and/or management plan.
- *Ideally* you will receive these documents in sequential order and with full knowledge of the previous document.



Preliminary site investigation [a.k.a the desk study]

- The most important stage of any investigation.
- Decides:
 - What to look for; &
 - Where to look for it.
- Determines if intrusive investigation. Prescribes the Data Quality Objectives [DQOs].



Detailed site investigation

- Purpose of the detailed investigation is to test the conceptual site model by:
 - Examining the ground conditions;
 - Sampling them;
 - Analysing them [for applicable range of contaminants];
 - Assessing analytical data with applicable criteria;
 - Establishes if there is a significant risk [i.e. re assess and validate/disprove the conceptual model].



Remediation action plan [RAP]

- Re state what significant contamination is.
- State the remedial goals.
- Detail the procedures and plans to achieve remedial goals.

Sometimes addressed care of Site Management Plan that runs in parallel to the RAP



Validation report

- Assesses conditions after remedial works.



Ongoing monitoring and management plans

- Apt where or when contamination is not removed but managed.
- Sometimes used for application for discharge permit under s. 15 of RMA.
- Monitoring programme should outline what is tested, when and where.



- As an EHO alarm bells should ring if the first you are informed about a contaminated site is at Validation Report or Monitoring Plan stage.
- In *my* humble opinion this is bad project management by the environmental consultant and applicant.

