


## Inspection and Troubleshooting of Onsite Wastewater Management Systems

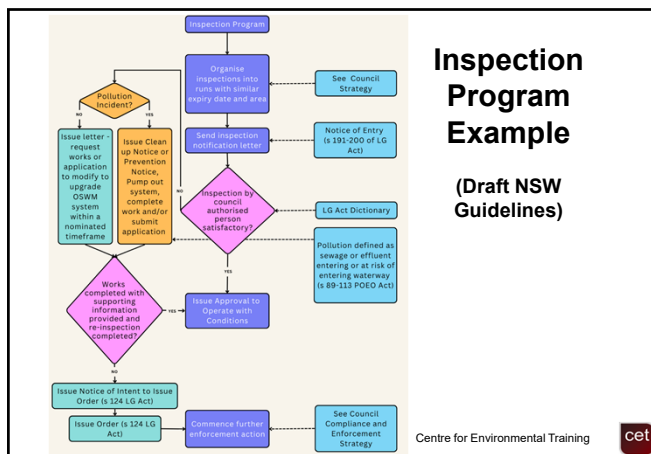
### Preparing for Inspection Inspection Checklists

Centre for Environmental Training 

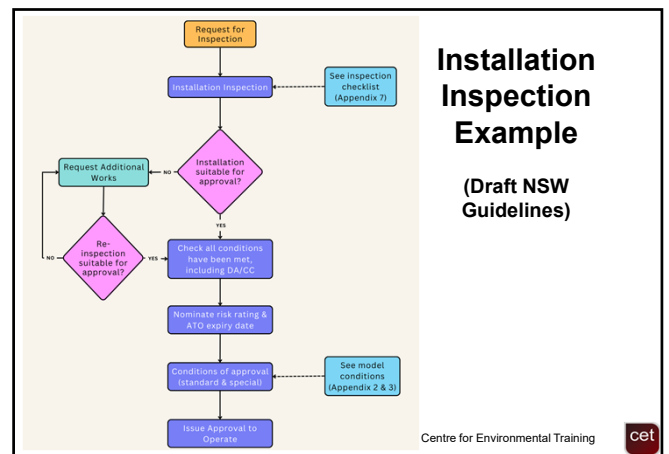
## Before you go out in the field


- OWMS Inspection Program
  - Include inspections for:
    - Audit / compliance
    - Complaints
    - Installation / alteration
    - Follow-up inspections
  - Staff - inspectors and administration
  - Group inspections into zones and time periods
  - Develop an inspection program procedure

Centre for Environmental Training 



Centre for Environmental Training 



Centre for Environmental Training 

## Preparation starts in the office

- WHS preparations
- Regulatory officers
  - Legal authority granted to officer
  - Authorised officer identification issued
  - ID must be carried at all times

Centre for Environmental Training 

## Contact property owner/ occupant

- Issue a Notice of Inspection (regulatory) or call / email (designer)
- Confirm date / time of inspection
- Request access to system is clear
- Request pets / stock are restrained
- Give opportunity to attend inspection, ask questions or change the date

Centre for Environmental Training 

## Records, Documentation and Means of Recording Inspection Results

- Paper files?
- Electronic records?
- Site plan aerial photograph available?
- Clipboard and pen
- Checklist(s) – electronic and paper for back-up
- Tablet

## Documentation

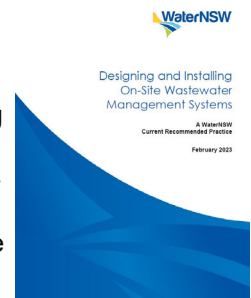
- Existing approvals (Installation and Operational)
  - Conditions to inspect against
  - Site plan helps to locate system
  - Original design details and plans
  - Can documents be accessed in the field?


## Checklists

- Provide consistency
- Simple to record
- Include standard questions, options, tick boxes and room for notes and diagrams
- Include media (electronic – photo / video)

## Checklists – Paper/ Manual

- Council specific or WaterNSW template
- Designing and Installing On-Site Wastewater Management Systems - A WaterNSW Current Recommended Practice



Designing and Installing On-Site Wastewater Systems 

**Checklist 1.1 Specific tank installation inspection for installers and Council Inspectors** (Review, Comment and Approve) (Download or Print) (Previous Version) (Download)

Client name: \_\_\_\_\_

Address: \_\_\_\_\_

Tank coordinates: \_\_\_\_\_

Installation date: \_\_\_\_\_

Type of tank (tick all that apply) e.g. septic tank also pump-out tank where the system includes a pump-out tank and pump-out well. Maximum of 4 tanks in a system. If any other use, specify in notes or attach photo.

Septic tank  Pump-out  Collection / holding tank  Other \_\_\_\_\_

Notes: \_\_\_\_\_

Manufacturer (Tank 1): \_\_\_\_\_ Model #: \_\_\_\_\_

Capacity: \_\_\_\_\_

Manufacturer (Tank 2): \_\_\_\_\_ Model #: \_\_\_\_\_

Capacity: \_\_\_\_\_


Specified or calculated tank capacity of each tank (litres): \_\_\_\_\_

Tank dimensions (as provided on manufacturer's design specification sheet)

| Tank (1)    | Tank (2) |
|-------------|----------|
| Length (mm) | mm       |
| Width (mm)  | mm       |
| Height (mm) | mm       |
| Depth (mm)  | mm       |

Tank type: \_\_\_\_\_

Location:  New  Existing  Other \_\_\_\_\_

Designing and Installing On-Site Wastewater Systems 

**Checklist 1.2 Operational AHA's inspection report for use by service providers and Council Inspectors**

Name: \_\_\_\_\_ Council area: \_\_\_\_\_

Address: \_\_\_\_\_

Tank coordinates: \_\_\_\_\_ Land application area coordinates: \_\_\_\_\_

Site (tick all that apply):  Domestic  Commercial

Service of tank:  Private  Public

General Comments: \_\_\_\_\_

Overall condition of tank:  Good  Fair  Poor

Notes: \_\_\_\_\_

Septic tank / chamber

Colour:  Yes  No Odour:  Yes  No Budget (m3): \_\_\_\_\_

De-sudge needed:  Yes  No Inlet/outlet junction clear:  Yes  No

Good biological activity:  Yes  No Budget return from start and operating:  Yes  No

Inspection / chamber

Ammonia level: \_\_\_\_\_ mg/L

Active sludge

Active sludge:  Yes  No Odour:  Yes  No

Sludge depth:  Yes  No

Sludge colour:  Yes  No

Sludge consistency:  Yes  No

Sludge quantity:  Yes  No

Sludge level:  Yes  No


Sludge depth:  Yes  No

Sludge colour:  Yes  No

Sludge consistency:  Yes  No

Sludge quantity:  Yes  No

Sludge level:  Yes  No

Centre for Environmental Training 

## Checklists - Electronic records

- Using an app on tablet, phone or web-based system
- Include tick boxes, drop downs, notes, etc.
- Incorporate GPS location, photos, video
- Some can draw from council databases
- Generate reports and emails

## Checklists - Electronic examples

- ArcGIS Survey123
  - <https://www.esri.com/en-us/arcgis/products/arcgis-survey123/overview>
- Safety Culture (iAuditor)
  - <https://safetyculture.com/>
- On-Trac
  - <https://www.on-trac.com.au/>
- OMA App
  - <https://omaapp.com/onsite-app/>

## Desktop review prior to inspection?

- Gather background data
  - Aerial photos
  - Problem identification
    - Visible on aerial photos – leaks?
    - Soils, groundwater, flood impact
    - Existing development and use
  - Site and system layout and location

## Locating the System

- Site plan with the tank and land application area marked?
- Is it as per the proposal or application?
- Is it visible on aerial photographs?
- Look at pictures of different dates
- Use GPS to locate tank and land application area for future records

## Site Plan from Application



## Google Earth



## Desktop study for design upgrades

- What sort of system are you expecting?
  - Treatment, LAA, wastewater inputs (flows, characteristics, variability, non-domestic activities and sources)
- How big should the system be to comply?
- Known constraints on the Site:
  - Development (existing, proposed), use, soils, groundwater, flooding, power

## Load the Vehicle

- Job list
- Checklists and recording equipment
- Inspection equipment
- Communications
- Hygiene and clean-up
- Authority ID
- Water