



Construction waste: from problem to resource

1. Construction waste - from problem to resource
2. Waste management plan – why and how?
3. Environmental impact assessment
4. Hazardous material survey
5. Waste sorting and organization on construction site
6. **How does the waste industry handle the various types of waste?**



How the waste industry handles the various types of waste?

Agenda:

- ✓ From origin to treatment
- ✓ Recycling, reuse or disposal
- ✓ Declaration of hazardous waste



From sorting on construction site to the waste reception

- ✓ Today's requirements for source sorting on construction site is 60%.
- ✓ The EU directive requires 70% material recycling of all non-hazardous waste by 2020.
- ✓ The contractor and the approved waste reception should agree a planned delivery of the different waste types.
- ✓ The contractor is responsible for the waste until it has been delivered to an approved waste reception.

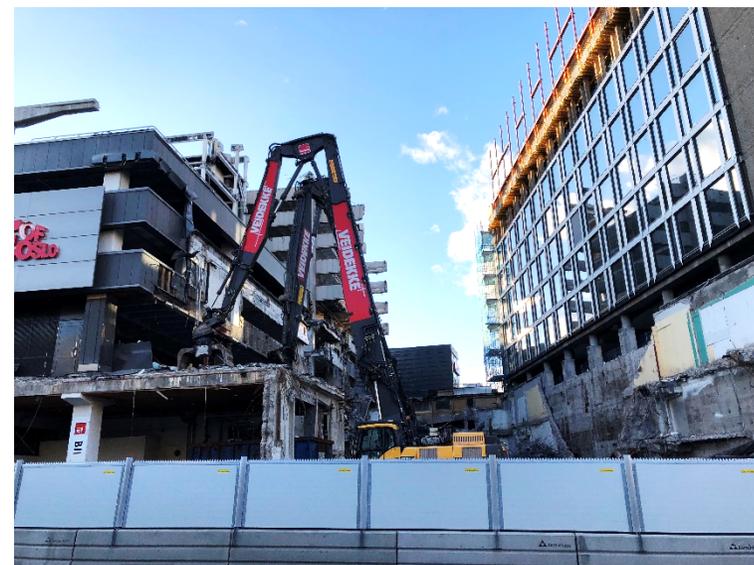


Foto: Guro Kristine Milli



Opportunities and limitations

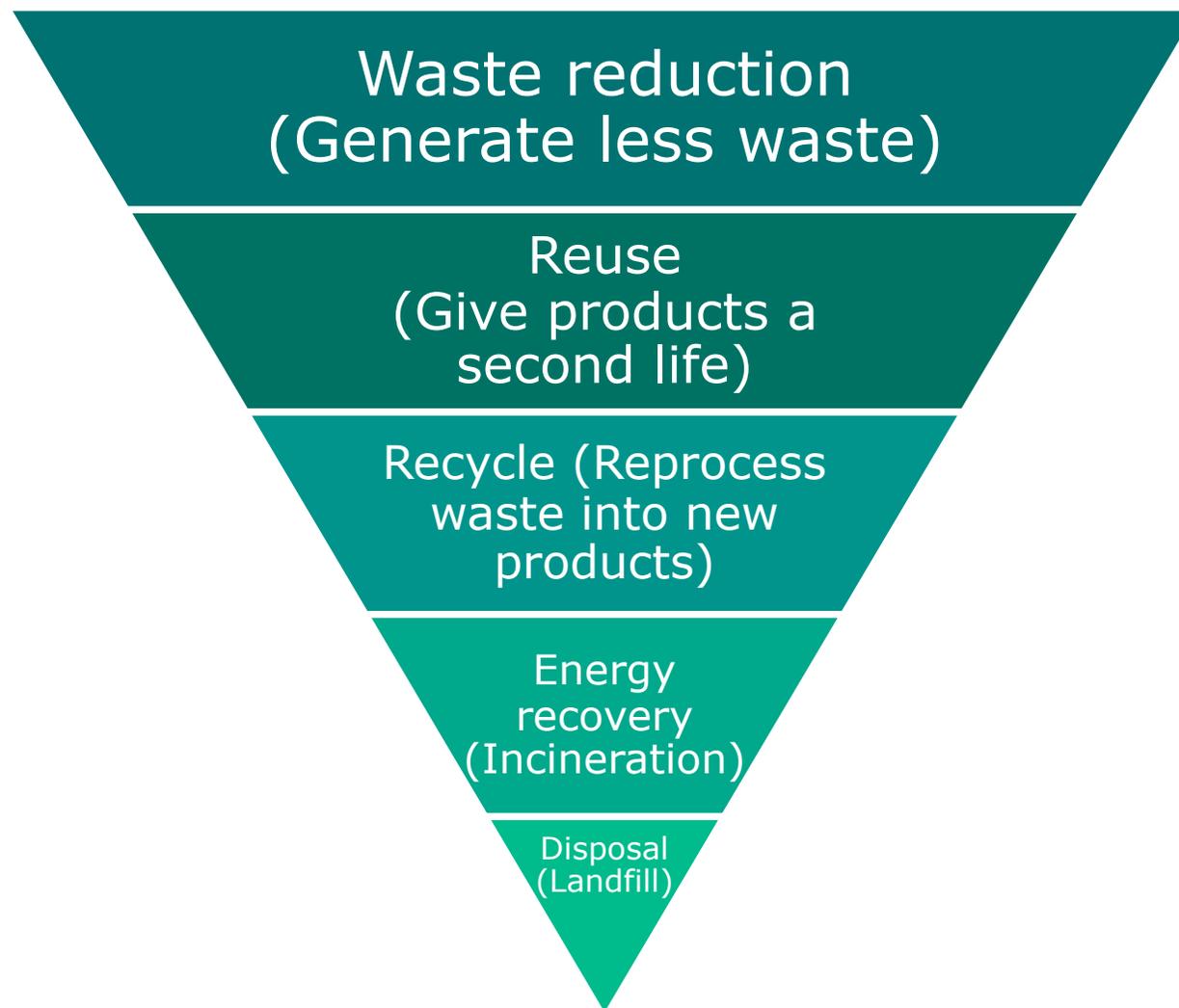
- ✓ Contact a waste company early on in the project/process.
- ✓ Examine what is feasible. What downstream solutions are relevant for the different waste types?
- ✓ Cooperating with the relevant waste company is beneficial.



Foto: Sverre Valde



The waste hierarchy





Recycling of materials

Examples of waste types for recycling:

- ✓ Metal.
- ✓ Gypsum.
- ✓ Glass.
- ✓ Plastic.
- ✓ Cardboard and paper.
- ✓ Concrete.



Foto: Sverre Valde



Recycling of materials – example

Pure wood.



Foto: Sverre Valde



Foto: Clas Olshon



Insulation



Foto: Sverre Valde



Gypsum



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Recycling of materials – example

Insulating glass.

- ✓ Collected in its original state (not broken or shattered).
- ✓ The glass is cut loose.
- ✓ The glass is sent to Glava Sealants for combustion (as hazardous waste).



Foto: Sverre Valde



Energy recovery

Example of waste types sent to energy recovery:

- ✓ Wood, clean and treated.
- ✓ Combustible hazardous waste.
 - ✓ Paint.
 - ✓ Vinyl flooring.
 - ✓ Vinyl tiles (non-asbestos containing).
 - ✓ Glue.
 - ✓ Roofing foil.
 - ✓ Sealants.
- ✓ Unsorted combustible waste.



Foto: Guro Kristine Milli



Disposal

Examples of waste types for disposal:

- ✓ Asbestos-containing material.
- ✓ Heavier building materials that cannot be utilized.
- ✓ Non-combustible hazardous waste.



Foto: Eirik Wormstrand



Multi contaminated fractions

Asbestos mixed with other hazardous substances:

- ✓ Should be handled as asbestos-containing.
- ✓ i.e.: should be wrapped in dustproof plastic and disposed.

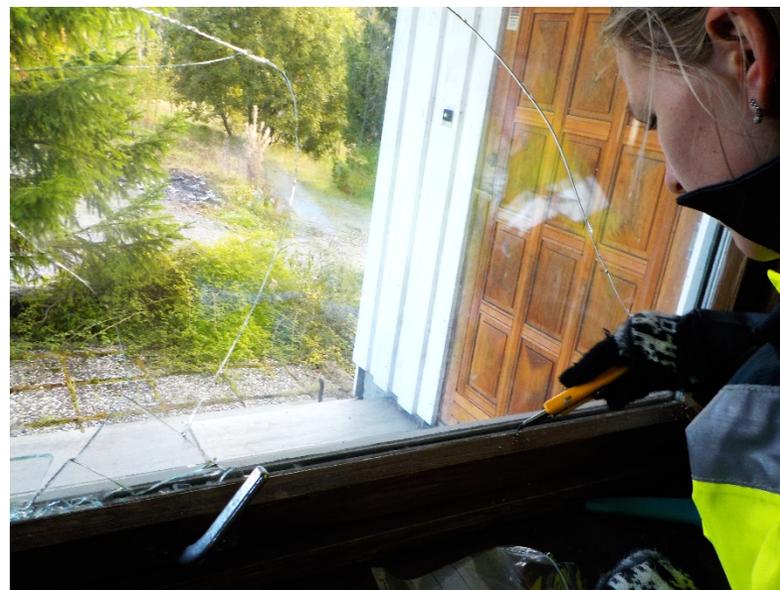


Foto: Mirja Emilia Ottesen



Multi contaminated fractions

Concrete with insulation.

- ✓ Concrete can be contaminated.
- ✓ The insulation casted into concrete can be hazardous waste.
- ✓ Insulation casted into the concrete is difficult to remove.



Foto: Torstein Viko



Export of hazardous waste

- ✓ Only allowed if the waste is exported for recycling, or if the waste cannot be treated in a responsible manner in Norway.
- ✓ Example: organic hazardous waste that cannot be finalized in Norway (Transformers and capacitors with PCB (polychlorinated biphenyl)).
- ✓ Export requires consent from Norwegian and foreign authorities.



The responsibility of the waste producer – declaration

- ✓ All hazardous waste must be declared.
- ✓ www.avfallsdeklarerer.no

AVFALLSDEKLARERING.NO Statens strålevern MILJØ-DIREKTORATET

FORSIDE INFORMASJON VEILEDERE REGELVERK AVFALLSKODER AVFALLSMOTTAK HJELP

Om løsningen

Avfallsdeklarerer.no er en løsning for deklarerer av farlig avfall og radioaktivt avfall. Løsningen benyttes av aktører med deklarasjonsplikt, myndigheter og andre som ønsker innsyn i deklart avfall.

Avfallsdeklarerer.no er ikke tilrettelagt for bruk på mobiltelefon.

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HVEM MÅ DEKLARERE?

Avfallsprodusenter og mottakere er pliktige å deklarerer farlig avfall. Husholdninger og privatpersoner trenger ikke deklarerer avfall, men skal opplyse om innholdet i avfallet ved levering til kommunale innsamlingsordninger.

HVA SKAL DEKLARERES?

Avfall som er klassifisert som farlig og/eller radioaktivt skal deklarerer. Avfall som verken er farlig eller radioaktivt, smittefarlig avfall, ordinært avfall, kasserte eksplosiver skal ikke registreres i denne databasen.

HVORFOR?

Farlig avfall kan forårsake skader på miljø, mennesker og dyr. Deklarering gjør at myndighetene får oversikt over hvor mye farlig avfall som finnes, hvor det har oppstått og hvem som har tatt hånd om det.

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Declaration of hazardous waste and radioactive waste



- ✓ The declaration form is filled out by the waste producer or a company authorized by the waste producer.
- ✓ Information about the waste producer, the waste (type and quality) and recipient of the waste is included in the declaration.
- ✓ One registration for each type of waste and each delivery
- ✓ Recipient of hazardous waste must confirm the delivery of the waste.