

Reconfiguring the Solid Waste Landscape

Towards a socio-ecologically inclusive solid waste landscape in
urbanising informal economic geographies of Global South



Infrastructure Catalogue

A compilation of findings from fieldwork

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Infrastructure Catalogue - A compilation of findings from fieldwork

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Cluster 10
Critical Environments: Material Ecologies of Care

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All drawings and images used are created by the author,
unless stated otherwise.

A Diverse Landscape

The diversity of the landscape is captured through cataloguing the different infrastructures along with their functions. It tabulates which typologies are socio-ecologically inclusive as per their location, function, stakeholder profile, and ecological and livelihood impacts. This helps in identifying the inclusive practices and noting the transformation potentials for the different typologies. It concludes with a transformation matrix, showing the transformation strategy applied and the resulting environmental impact.

Diversity Parameters

Scale _____ City | Neighbourhood _____

Location _____ Street typologies _____

Functions _____ Collection | Sorting | Disposal _____

Area and morphologies served _____ Multiple | High rise | Dense Settlements | Plotted Housing _____

Stakeholder profile _____ Public (Municipality) | Private | Waste generator | Informal Waste picking _____

Ecological inclusivity profile _____ Polluting | Non-polluting _____

Social inclusivity profile _____ Inclusive | Not-inclusive _____

Possible transformation _____ Ecological repair | Retain | Adapt | Retrofit | Integrate _____



Open pit
dump yard



Incinerators
and waste
compressors



Material
recovery facilities



Composts



Mixed waste
collectors



1) Landfill (Open pit dump yard)

Scale: City

Location: Industrlal area on city’s edge; along the drain



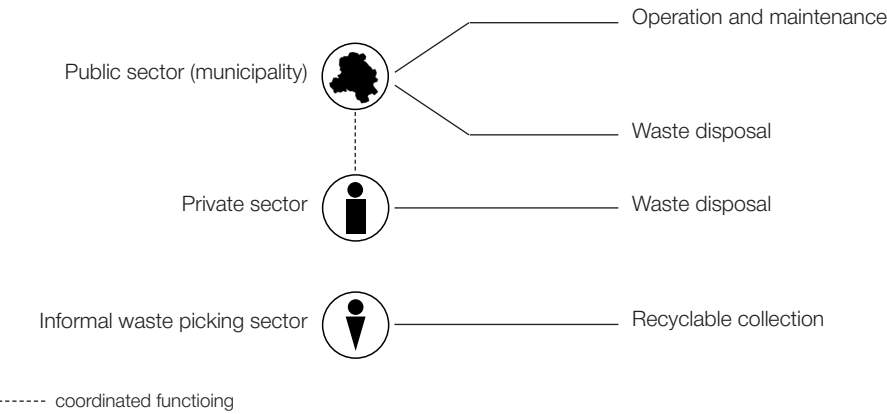
Area and morphologies covered:

- Four districts
- Multiple morphologies

Functions:

- disposal of mixed waste
- collection point for recyclables
- disposal site for waste to energy plants (waste residue)

Stakeholder profile:



Possible transitions: Ecological repair + social integraation



Fig 1. Ghazipur landfill, East Delhi

Ecological profile - Polluting



Groundwater and surface water pollution



Air pollution



Soil pollution



Social profile - Inclusive



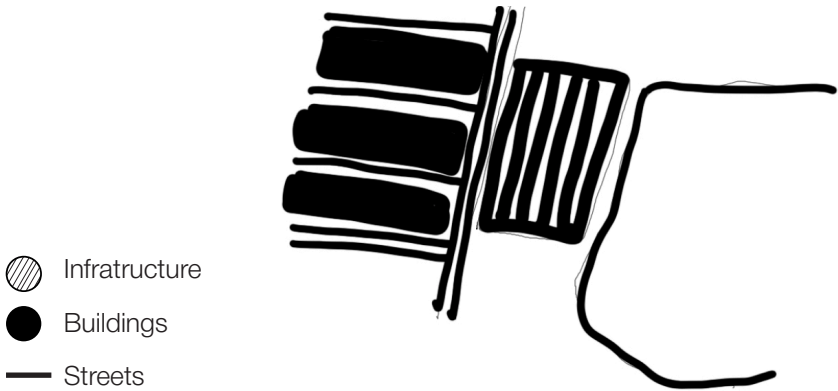
Place for recyclable collection



2) Incineration (Waste to Energy) Plant

Scale: City

Location: Industrlal area on city's edge



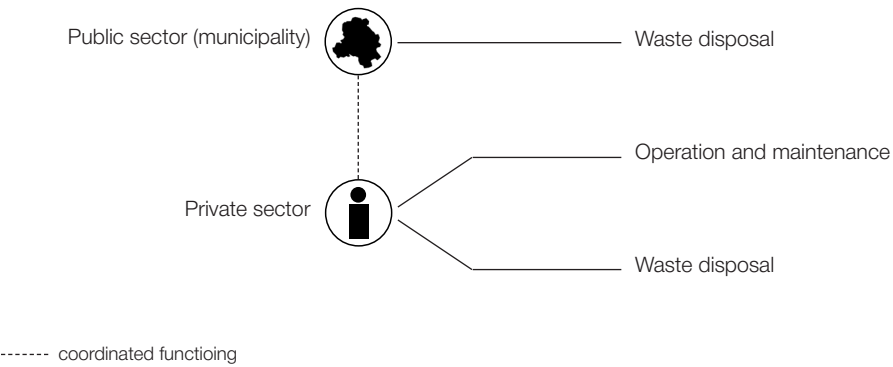
Area and morphologies covered:

- Four districts
- Multiple morphologies

Functions:

- Incinerating combustible recyclables
- Generating power

Stakeholder profile



Possible transitions: Adapt



Fig 2. Incineration (Waste to Energy Plant) near Ghazipur Landfill, East Delhi

Ecological profile - Polluting

Air pollution



Social profile - Not Inclusive

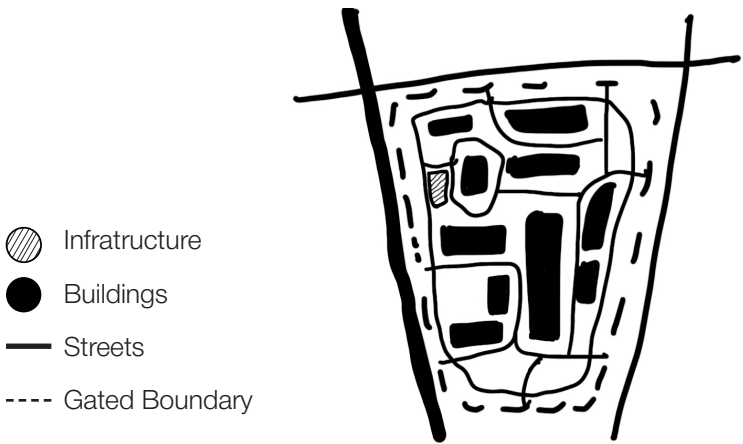
Reduces material availability for the informal waste picking sector



3) Compost pit

Scale: Neighbourhood

Location: Neighbourhood commercial centre



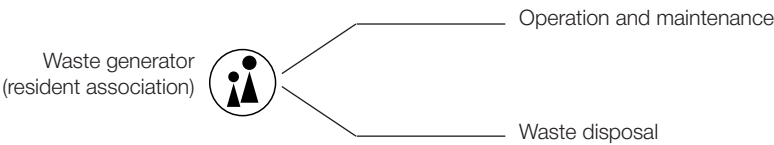
Area and morphologies covered:

- Gated high rise

Functions:

- Composting biodegradable waste of the neighbourhood

Stakeholder profile



Possible transitions: Retaining and connect



Fig 3. Compost pit in a neighbourhood park, New Delhi

Ecological profile - Non-polluting



Composting facility



Social profile - Inclusive



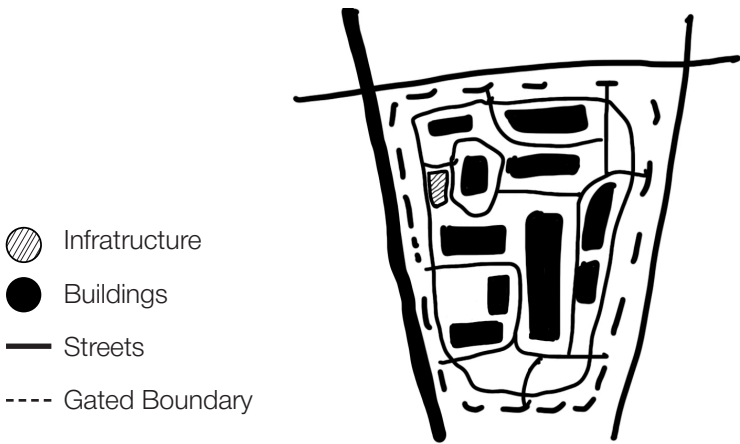
Has no impact on informal
waste picking sector



4) Material Recovery Facility

Scale: Neighbourhood

Location: Neighbourhood commercial centre



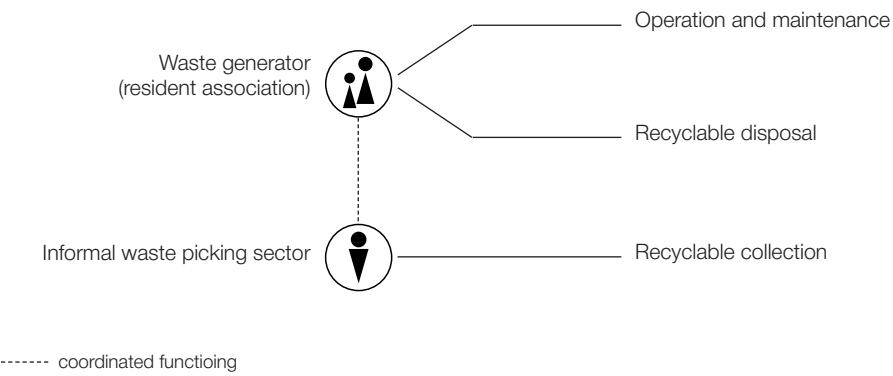
Area and morphologies covered:

- Gated high rise

Functions:

- Collecting segregated recyclables from the neighbourhood

Stakeholder profile



Possible transitions: Retain and retrofit



Fig 4. Material recovery facility in a neighbourhood market, New Delhi

Ecological profile - Non-polluting



Segregation facility



Social profile - Inclusive



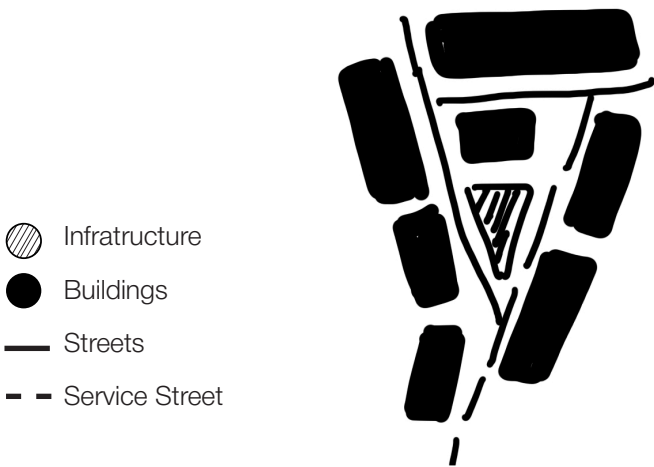
Place for recyclable collection



5) Material Recovery Facility

Scale: Neighbourhood

Location: Neighbourhood commercial centre



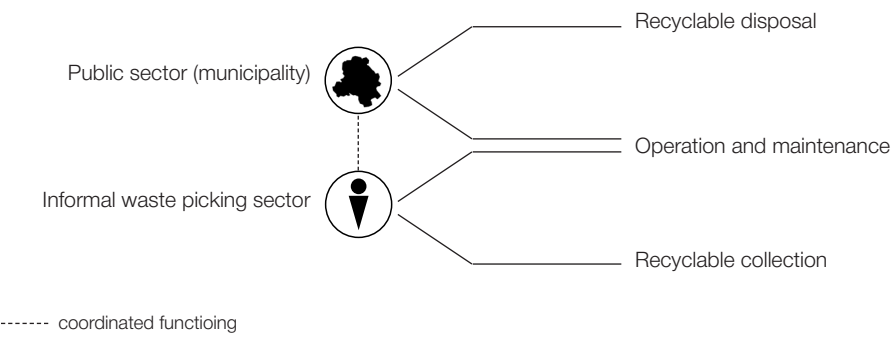
Area and morphologies covered:

- Multiple morphologies

Functions:

- Collecting segregated recyclables from the neoghbourhood

Stakeholder profile:



Possible transitions: Retain and retrofit



Fig 5. Material recovery facility on a neighbourhood street, New Delhi

Ecological profile - Non-polluting



Segregation facility



Social profile - Inclusive



Place for recyclable collection



6) Transfer station - Type I

Scale: Neighbourhood

Location: Neighbourhood street



- ▨ Infrastructure
- Buildings
- Streets

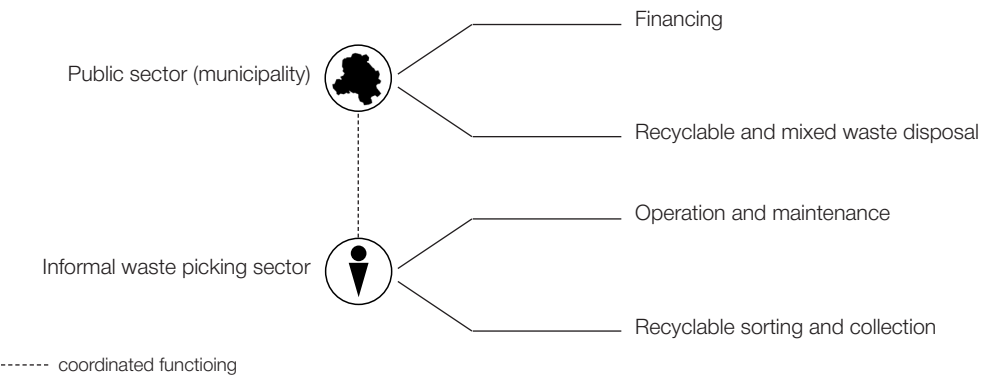
Area and morphologies covered:

- Multiple morphologies

Functions:

- Receiving mixed waste
- Sorting recyclables

Stakeholder profile:



Possible transitions: Adapt and retrofit



Fig 6. Transfer station to collect and sort waste, New Delhi

Ecological profile - Polluting



Air pollution



Social profile - Inclusive



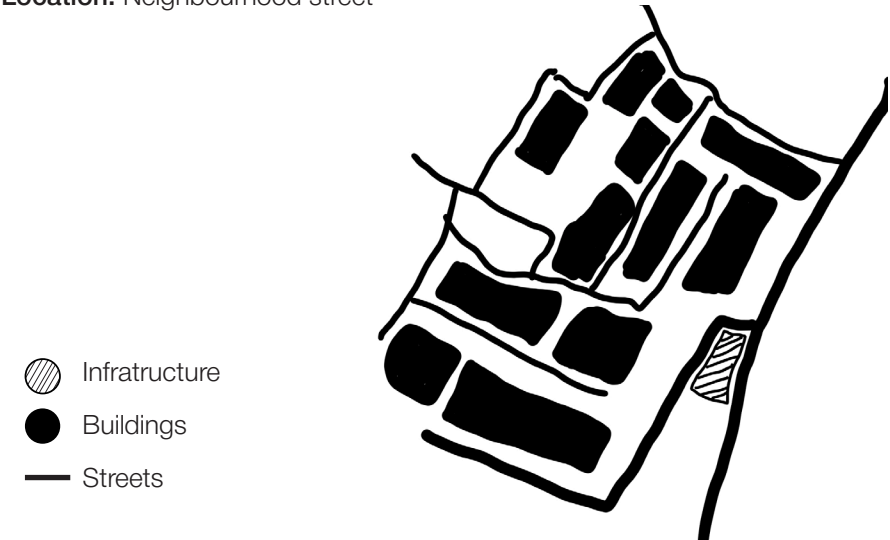
Place for recyclable collection



7) Transfer station - Type I

Scale: Neighbourhood

Location: Neighbourhood street



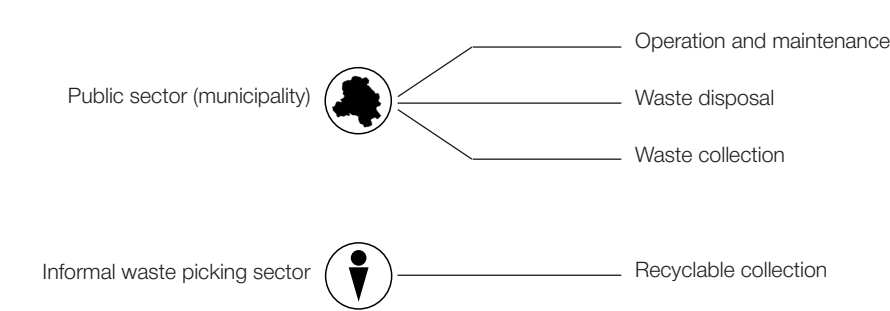
Area and morphologies covered:

- Dense settlements

Functions:

- Receiving mixed waste
- Sorting recyclables

Stakeholder profile:



Possible transitions: Adapt and retrofit



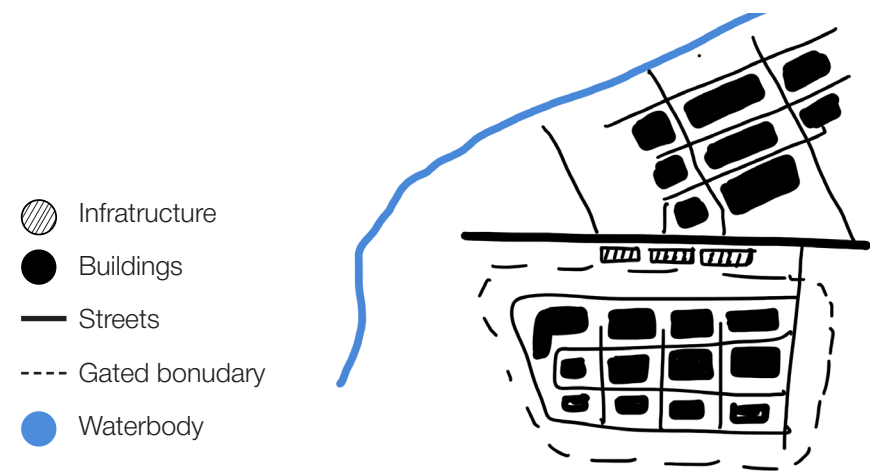
Fig 7. Transfer station to collect and sort waste, New Delhi



8) Transfer station - Type I

Scale: Neighbourhood

Location: Secondary street



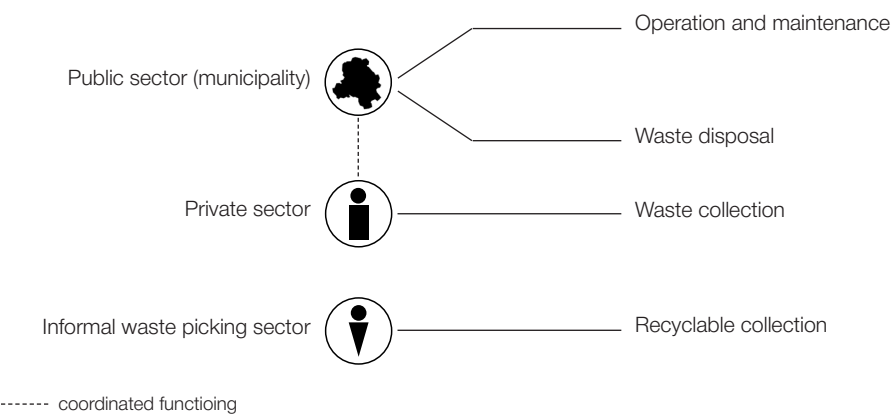
Area and morphologies covered:

- Multiple morphologies

Functions:

- Receiving mixed waste
- Sorting recyclables

Stakeholder profile:



Possible transitions: Adapt and retrofit



Fig 8. Transfer station to collect and sort waste, New Delhi

Ecological profile - Polluting



Air pollution



Social profile - Inclusive



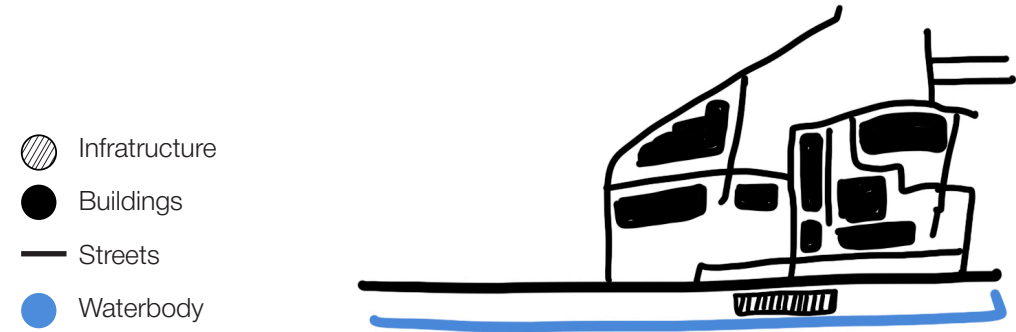
Place for recyclable collection



9) Transfer station - Type II

Scale: Neighbourhood

Location: Secondary street



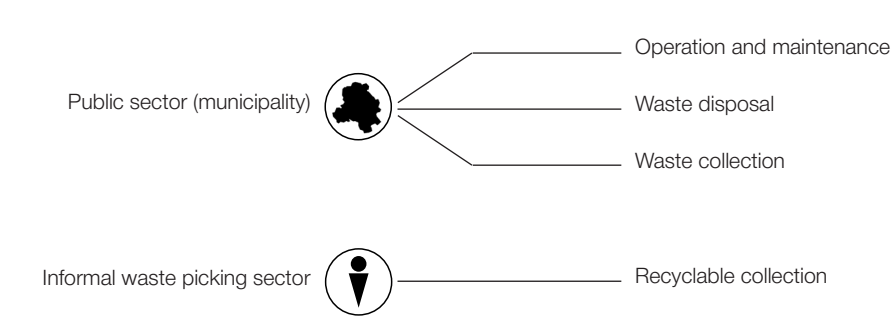
Area and morphologies covered:

- Multiple morphologies

Functions:

- Receiving mixed waste
- Sorting recyclables

Stakeholder profile:



Possible transitions: Ecological repair and retrofit



Fig 9. Transfer station to collect and sort waste, New Delhi

Ecological profile - Polluting



Air pollution



Soil pollution



Social profile - Inclusive



Place for recyclable collection



10) Transfer station - Type II

Scale: Neighbourhood

Location: Neighbourhood street



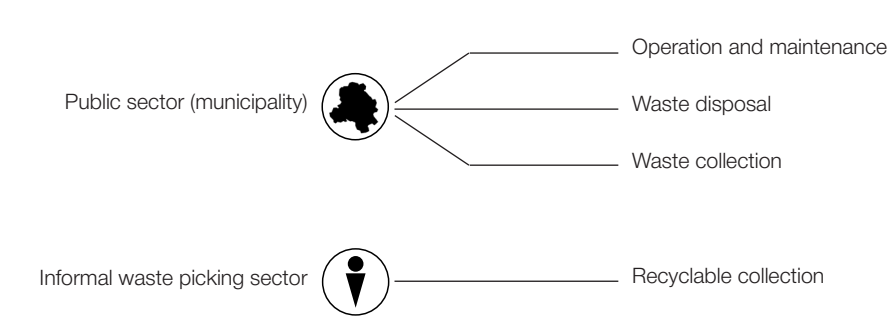
Area and morphologies covered:

- Dense settlements
- High rise

Functions:

- Receiving mixed waste
- Sorting recyclables

Stakeholder profile:



Possible transitions: Ecological repair and retrofit



Fig 10. Transfer station to collect and sort waste, New Delhi

Ecological profile - Polluting



Air pollution



Soil pollution



Social profile - Inclusive



Place for recyclable collection



11) Fixed compactor transfer station - Type I

Scale: Neighbourhood

Location: Neighbourhood street



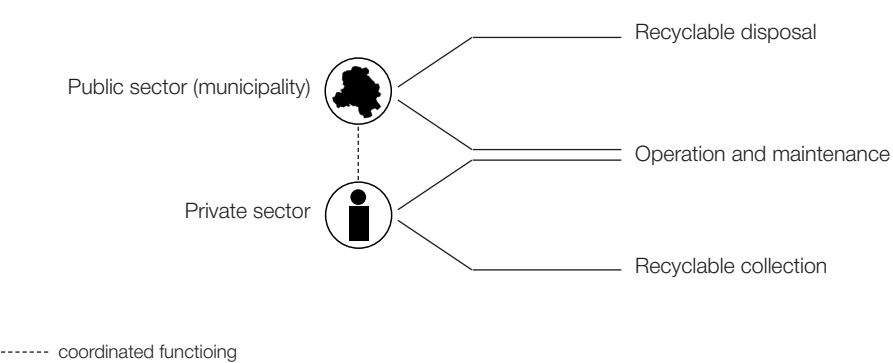
Area and morphologies covered:

- Multiple morphologies

Functions:

- Receiving recyclables
- Compacting recyclables for incineration

Stakeholder profile:



Possible transitions: Adapt and retrofit



Fig 11. Fixed compactor transfer station, East Delhi



12) Fixed compactor transfer station - Type II

Scale: Neighbourhood

Location: Neighbourhood street



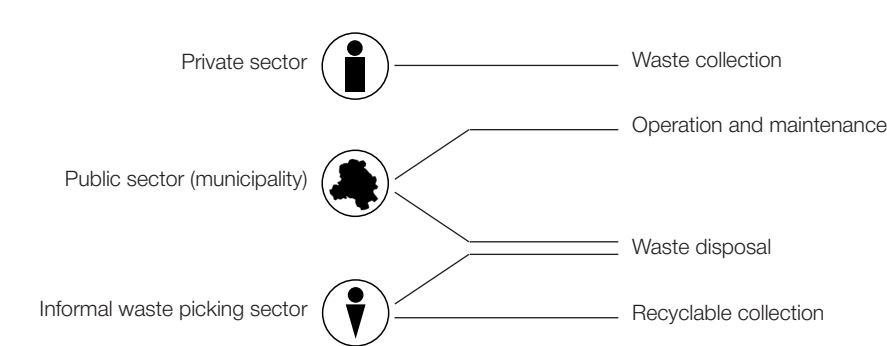
Area and morphologies covered:

- Plotted housing

Functions:

- Receiving recyclables
- Compacting recyclables for incineration

Stakeholder profile:



Possible transitions: Adapt and retrofit



Fig 12. Fixed compactor transfer station, West Delhi

Ecological profile - Polluting



Air pollution



Social profile - Inclusive



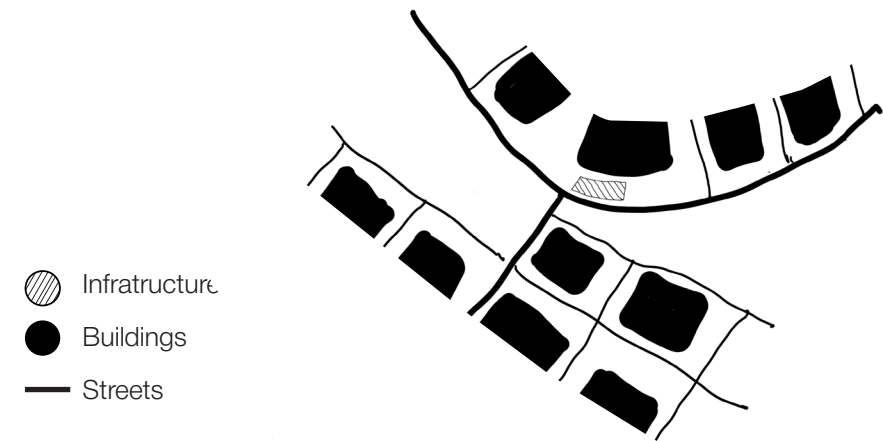
Place for recyclable collection



13) Fixed compactor transfer station - Type II

Scale: Neighbourhood

Location: Secondary street



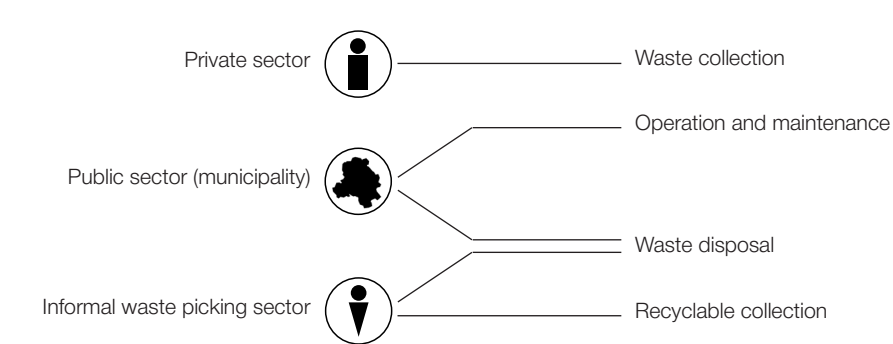
Area and morphologies covered:

- Plotted housing

Functions:

- Receiving recyclables
- Compacting recyclables for incineration

Stakeholder profile:



Possible transitions: Adapt and retrofit



Fig 13. Fixed compactor transfer station, West Delhi

Ecological profile - Polluting



Air pollution



Social profile - Inclusive



Place for recyclable collection



Infrastructure

Inlusivity profile

Transformation strategy

Impact scale

Place of Impact

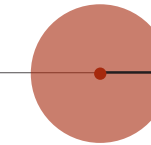
Ecological Inclusivity

Social Inclusivity

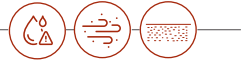
Landfill



Ecological repair and
social integration



City



Incineration



Adapt



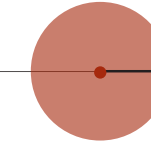
Neighbourhood



Compost pit



Retain and integrate



City



Material Recovery Facilities



Retain and retrofit



Neighbourhood



Transfer station - Type I



Adapt and retrofit



Neighbourhood



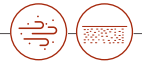
Transfer station - Type II



Ecological repair and retrofit



Neighbourhood



Fixed compactor transfer
station - Type I



Adapt and retrofit



Neighbourhood



Fixed compactor transfer
station - Type II



Adapt and retrofit



Neighbourhood



