

# Basic Landfill Processes

**Overview:** This session is designed to give a basic insight into landfill including how sites operate and the associated environmental issues as well as a brief introduction to the Manywells site.

- Introduction
- Landfill Theory
- Manywells Site



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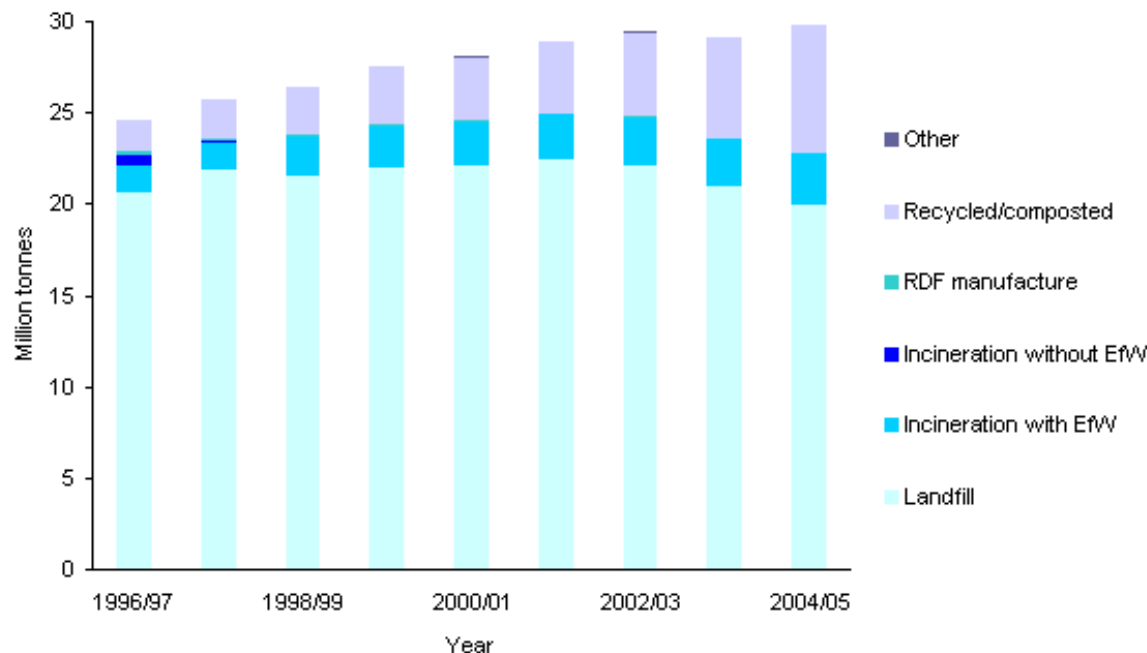
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## Landfill: Introduction and Theory

Landfill traditionally the main route for waste – links with quarrying activities, technological issues

EU Landfill Directive – reduction in landfill of waste

- 2010: 75% of 1995 figures
- 2013: 50% of 1995 figures
- 2020: 35% of 1995 figures



EfW = energy from waste RDF = refuse derived fuel

Source: Defra



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## Landfill Reduction

### Why?

- global environmental issues: climate change (methane)
- local environmental issues: land contamination
- unsustainable

### How?

Landfill Allowance Trading Scheme (LATS), allowance to each local authority which will be reduced over time

### Results?

- 2006/7 11.5mil tonnes MSW to landfill, reduction of 800,000 tonnes <sup>1</sup>
- But; need to reduce by 4.9mil tonnes a year to reach 2013 EU Landfill Directive target <sup>2</sup>

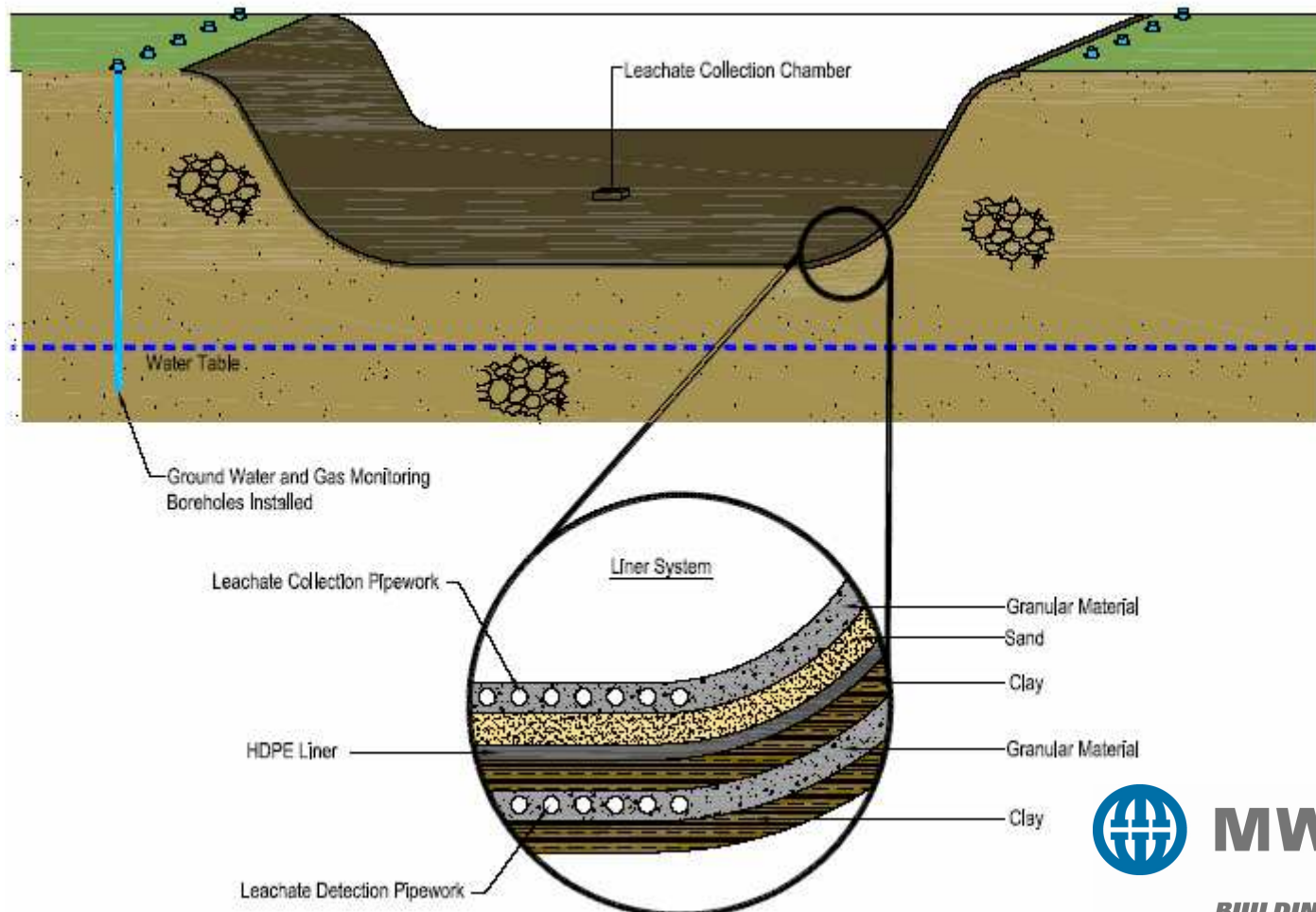
<sup>1</sup> Environment Agency, October 2007

<sup>2</sup> DEFRA house of commons Report, Reducing the Reliance on Landfill in England



## Landfill Construction

### 3. Construction - containment (liner and monitoring), infrastructure

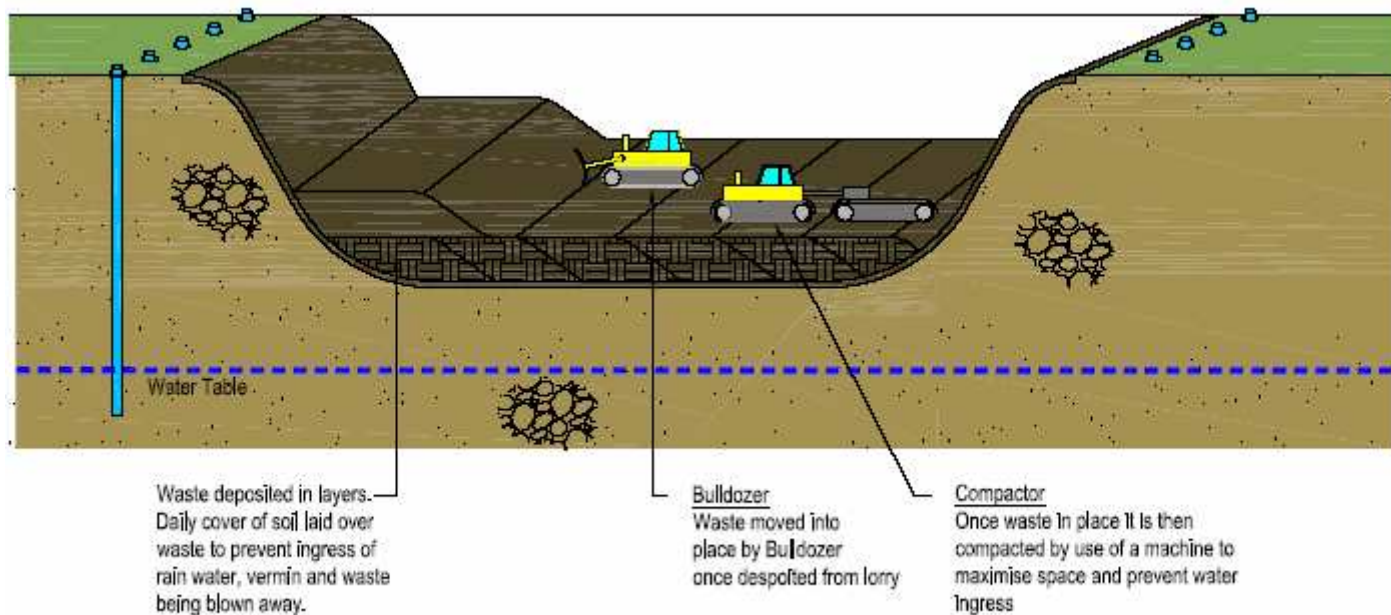


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## Landfill Operation

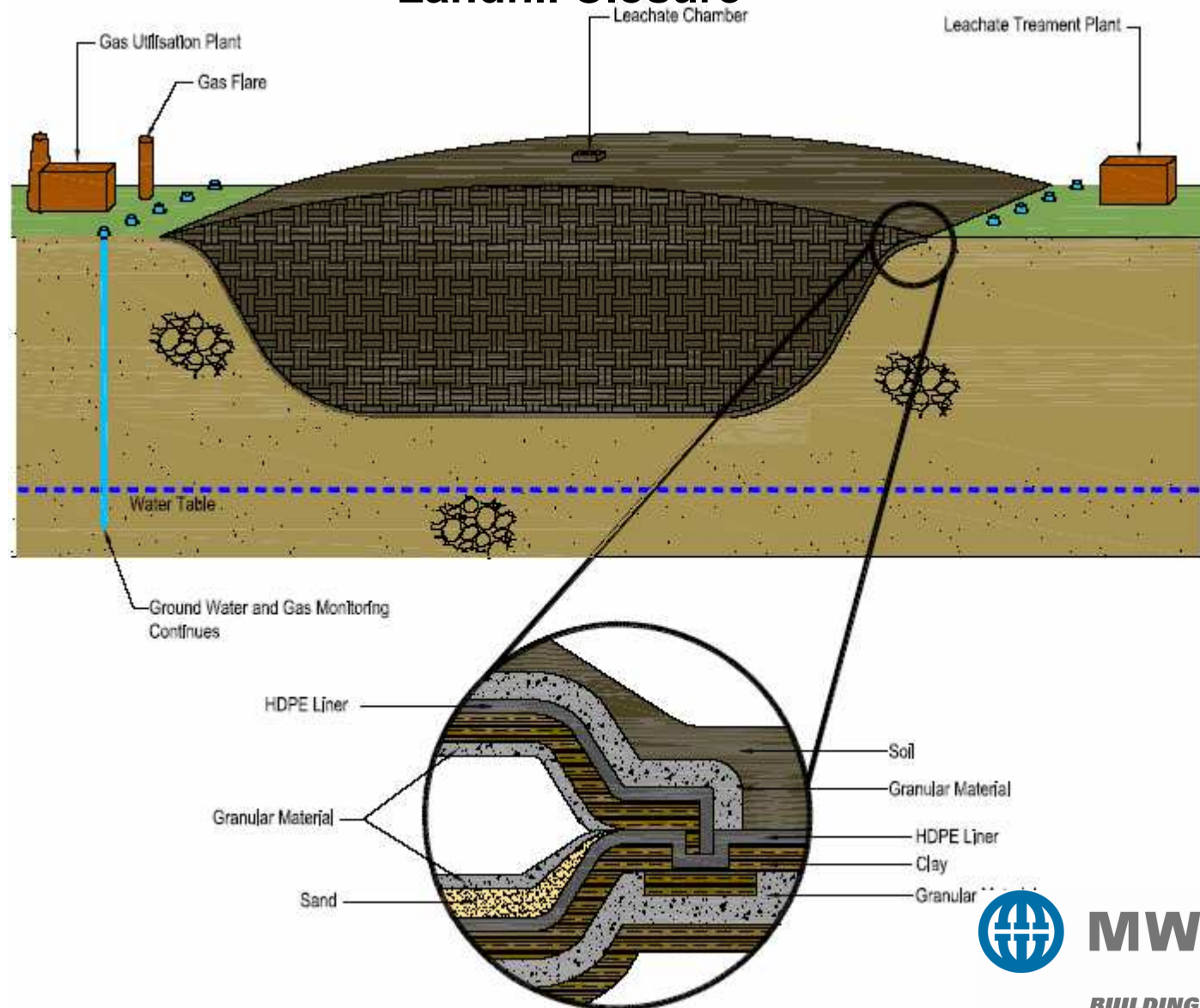
1. Permit to operate (from EA)
2. Waste disposal
3. Ancillary operations
4. Environmental monitoring



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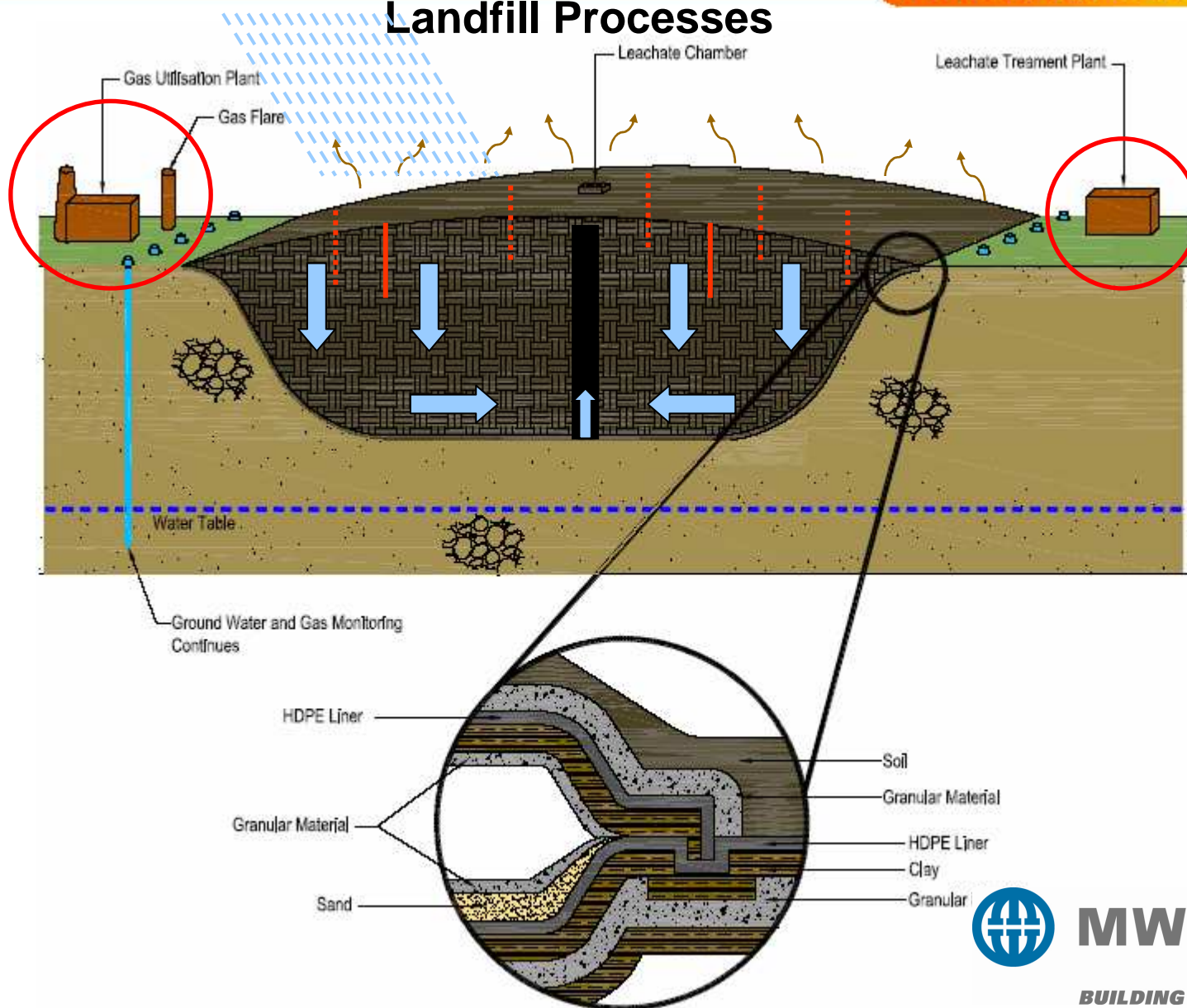
## Landfill Closure



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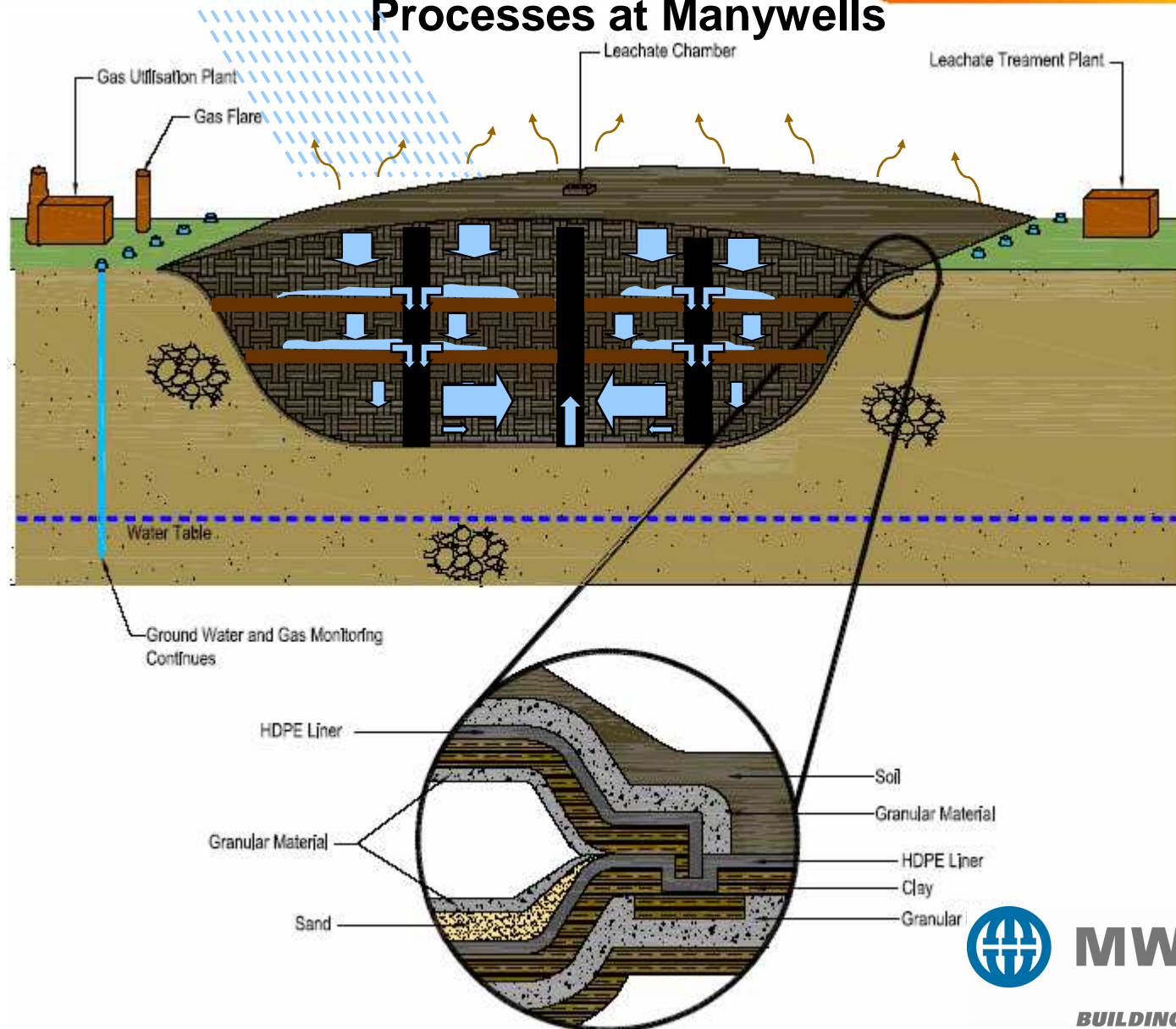
## Landfill Processes



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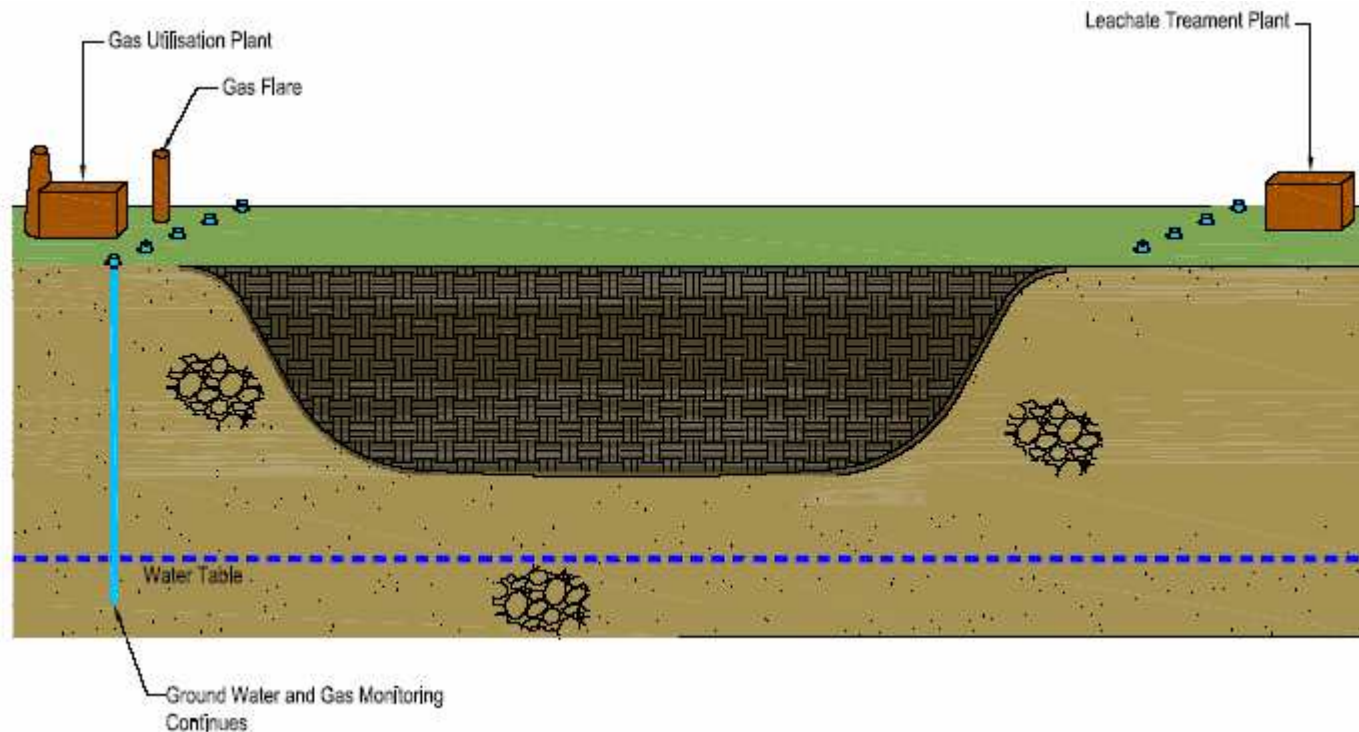
## Processes at Manywells



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## Landfill Remediation



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## References

**1 Environment Agency Report on the Landfill Allowances and Trading Scheme,  
October 2007**

[http://www.environment-agency.gov.uk/commodata/acrobat/lats\\_report\\_1896047.pdf](http://www.environment-agency.gov.uk/commodata/acrobat/lats_report_1896047.pdf)

**2 DEFRA house of commons Report, Reducing the Reliance on Landfill in England,  
October 2007**

<http://www.publications.parliament.uk/pa/cm200607/cmselect/cmpubacc/212/212.pdf>

## Further Information

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

[www.wasteonline.org.uk](http://www.wasteonline.org.uk)

[www.howstuffworks.com](http://www.howstuffworks.com)

<http://maps.live.com/>



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