

www.capem.eu



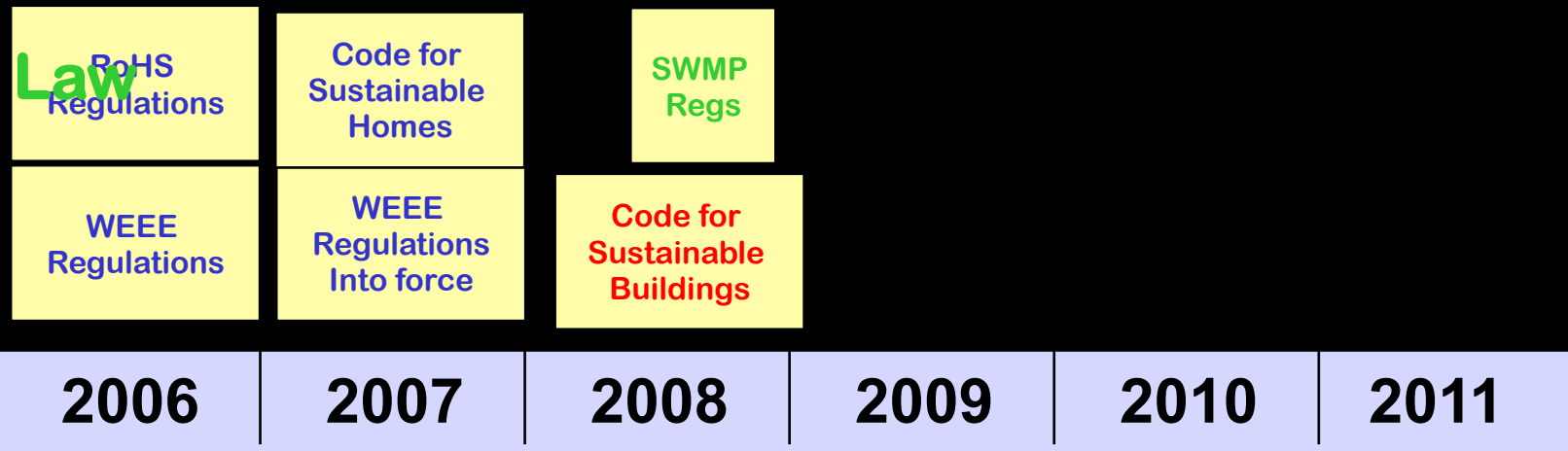
Apprentice Centre

Recycling lives
Waste Minimisation & Management

Key Legislative Drivers Timeline

EU directive

UK Law



Fiscal



Targets & Bans



Groundwork Merton Landscape Project SWMP



Options

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

Bookmarks

Signatures

Layers

Pages

Comments

Site Waste Management Plans

Annex A. Site Waste Management Plan Checklist

Project name

Project address/location

Main contractor:

Contractor details, including signature of authorised representative

Client signature

Signature of identified sub-contractor (see C3 & 4)

Signature of identified sub-contractor (see C3 & 4)

Project Stages	Questions to consider	Tick If 'Yes'	Comment: If 'yes', what action have you taken/do you propose to take? If 'no', why not?
Policy	1 Has your organisation adopted a waste management policy?		
	2 Has the client signed the Site Waste Management Plan?		
	3 Have relevant sub-contractors producing significant wastes streams been identified?		
	4 Have the identified sub-contractors signed the Site Waste Management Plan?		
Procurement	5 Has a careful evaluation of materials been made so that over-ordering and site wastage is reduced?		
	6 Has full consideration been given to the use of secondary and recycled materials?		
	7 Is unwanted packaging to be returned to the supplier for recycling or re-use?		
	8 Can unused materials be returned to purchaser or used on another job?		
Project planning	9 Has responsibility for waste management planning and compliance with environmental legislation been assigned to a named individual at both main contractor and identified sub-contractors?		
	10 Has a project programme been developed to include likely waste arisings how much, when, and what types?		
	11 Has an area of the site been designated for waste management, including segregation of waste?		

12

Guidance for Construction Contractors and Clients

Project Stages	Questions to consider	Tick If 'Yes'	Comment: If 'yes', what action have you taken/do you propose to take? If 'no', why not?
Project planning	12 Have targets been set for the different types of waste likely to arise from the project?		
	13 Have measures been put in place to deal with expected (and unexpected) hazardous waste?		
	14 Has disposal of liquid wastes such as wash-down water and lubricants been considered?		
	15 Where relevant, has a discharge consent been obtained from the Agency?		
	16 Has agreement been sought from the sewerage company for trade effluent discharge?		
	17 Have opportunities been considered for re-use of materials on-site?		
	18 Have opportunities been considered for re-use of materials off-site?		
	19 Have opportunities been considered for on-site processing and re-use of materials?		
	20 Have opportunities been considered for reprocessing materials off-site?		
	21 Have you considered what are the most appropriate sites for disposal of residual waste from the project?		
	22 Are there opportunities for reducing disposal costs from waste materials which may have a commercial value?		
Site operations	24 Has responsibility for waste management on-site and compliance with environmental legislation been assigned to a named individual?		
	25 Have toolbox talks been planned for all site personnel about waste management on-site?		
	26 Are selected waste materials segregated to allow best value to be obtained from good waste management practices?		
	27 Are containers/slips clearly labelled to avoid confusion?		

13

8.26 x 11.69 in

14 of 20

http://www.greenspec.co.uk/rtf/APP_SWMP_SiteWManPlan.rtf - Microsoft Internet Explorer

File Edit View Insert Format Tools Table Go To Favorites Help

Back Forward Stop Reload Home Search Favorites Print Mail TV Yellow Speech People

Address http://www.greenspec.co.uk/rtf/APP_SWMP_SiteWManPlan.rtf Go

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

Site Waste Management Plan Checklist

Project name	
Project address/location	
Main contractor	
Contractor details, including signature of authorised representative	
Client signature	
Signature of identified sub-contractor (see Q3 & 4)	
Signature of identified sub-contractor (see Q3 & 4)	

Project Stages	Questions to consider	Tick if 'Yes'	Comment: If 'yes', what action have you taken/do you propose to take? If 'no', why not?
Policy	1 Has your organisation adopted a waste management policy?		
	2 Has the client signed the Site Waste Management Plan?		
	3 Have relevant sub-contractors producing significant wastes streams been identified?		
	4 Have the identified sub-contractors signed the Site Waste Management Plan?		

Project Stages	Questions to consider	Tick if 'Yes'	Comment: If 'yes', what action have you taken/do you propose to take? If 'no', why not?
Procurement	5 Has a careful evaluation of materials been made so that over-ordering and site wastage is reduced?		

Site Waste Management Plan data sheet

Project name	
Project address/location	
Main contractor	
Person responsible for waste management on site (name and job title)	
Person and company completing this form, if different	

†

Types of waste arising (add more rows if needed): (darker grey tone suggests unnecessary, unlikely or undesirable) white spaces are possible options											
Waste group	Material	Quantity (in m³)									
		Retain insitu and reuse	Remediate or repair insitu and reuse	Re- use on site	Re-use off- site Waste/ materials exchange	Segregate to Recycle or recover on site	Segregate to recycle off-site, off- cut take back collection scheme Return to producer	Disposal to recycling facility Recycled material producer	Disposal to WML exempt site	Reduce Hazard then landfill	Disposal to landfill
Inert	Clean Subsoil										
	Clean Sand										
	Clean Gravels										
	Clean Rock										
Inactive	Flat Glass										
	Set Concrete										
	Masonry Stone, Brick, Block										
	Ceramics										
	Cement, mortar, screed, render										
Active	Topsoil										
	Green Waste					Compost					
	Untreated timber										
	Lime mortar, render, paint, Limecrete										
	Mixed Metals										
	Office paper										

Full Screen

Close Full Screen

Project Stages		Questions to consider	Tick if 'Yes'	Comment: If 'yes', what action have you taken/do you propose to take? If 'no', why not?
Procurement	5*	Has a careful evaluation of materials been made so that over-ordering and site wastage is reduced? How are materials procured? Who procures the materials? Does this affect 'ownership' and wastefulness? How are usage or wastage % of materials estimated?*		Provide Outline Bill of Quantities Provide Contractors Buying department remeasure Workshop to compare and decide Provide Manufacturer's supply batch quantities/product literature Workshop to Determine manufacturer supply batch quantities ; compare & predict waste ; suggest opportunities to reduce *
	5A*	Has attention been paid to minimising waste through the design process? Are the designers involved in the SWMP workshops? Acknowledgement of standard sizes? Awareness of minimum orders? Choice of materials ; minimising different types? Simplification of construction? Use of preassembly or prefabrication? Has provision for storage been made in the design for spares for ongoing maintenance of the building? Has the Client's FM been involved in its provision?*	*	Provide Manufacturer's technical literature on products Workshop to review and highlight high waste quantities *
	6*	Has full consideration been given to the use of secondary and recycled materials? Are materials from alteration or demolition works recyclable during the project to return to the site as new product? Consider temporary and permanent works Ensure specification does not exclude recycled Check each trade or work package*		Provide Outline or Full Spec or Bill of Quantities or annotated drawings Workshop to review spec or BofQ and brainstorm Provide WRAP Reference Guides on recycled materials Provide Live website access with links to recycled material or products AggRegain ; WRAP ; Recoup ; EcoConstruction.org ; NGS GreenSpec Workshop to compare ; comment ; and offer improvement opportunities *
	7*	Is unwanted packaging to be returned to the supplier for recycling or re-use? Have all take-back ; use or return ; return to stock schemes been investigated? Are systems in place to enable return of pallets and packaging on multiple delivery items?*		Provide information on manufacturers with packaging take-back scheme Provide NGS GreenSpec APP ROMP Recycling Opportunities materials Packaging Provide SMART Audit statistics on waste % Provide Envirowise Guide to packaging Workshop to determine quantities of packaging Workshop to determine routs to reuse or recycling *

Full Screen
Close Full Screen

Page Break



Assembly in Project Specification

Specification

C20

Demolition/
Deconstruction
Resource
Recovery

Specification

C21-

C90
work on
existing
buildings

Specification

C91

Alteration
Resource
Recovery
Waste
minimisation

Specification

D10-

D19

Earthwork
Foundations

Specification

D20

Excavation
Resource
Recovery
Waste
minimisation

Specification

D21-

Q28
New-build
Structure
Landscape

Specification

Q29

Landscape
Resource
Recovery
Waste
minimisation

Specification

R10-

Z31

Services
Reference
Sections

Assembly in Project Specification

Appendix

EWC

European
Waste
Catalogue

Appendix

SWMP

Site Waste
Management
Plan

Appendix

ASR

Architectural
Salvage
Reclaim

Appendix

MEW

Materials
Exchange
Websites

Appendix

FFEI

Furniture
Fixtures
Equipment
IT Recovery

Appendix

ROMP

Recycling
Operations
Materials
Packaging

Appendix

MRR

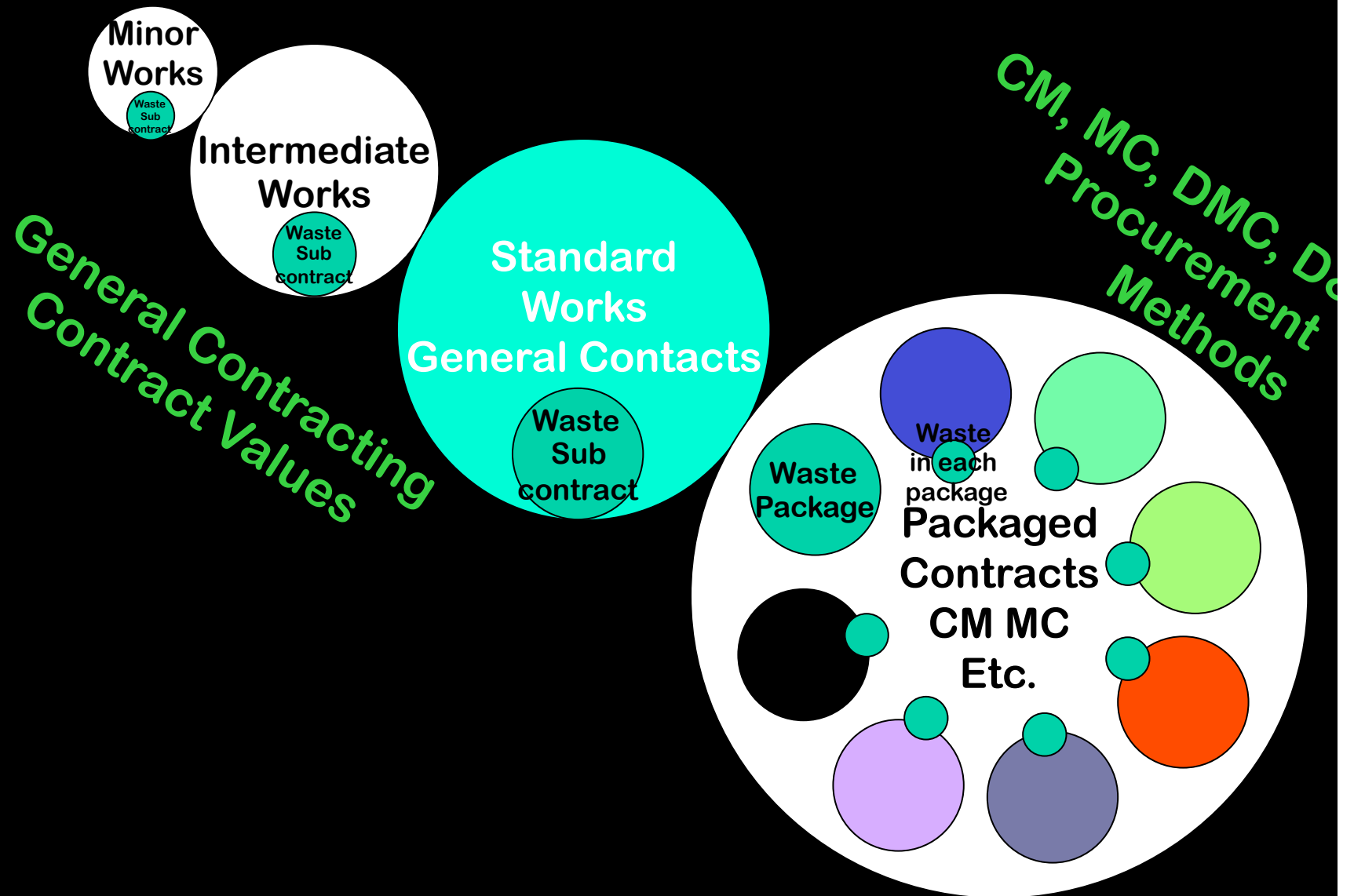
Materials
Recovery &
Reuse

Appendix

PDA

Pre-Demolition
Audits

Future Development



Material streams

If we are to engage consumers and encourage better recycling behaviour, it is essential that material streams signage at bring sites and household recycling centres includes clear, legible and practical layouts with consistent and distinct colouring.

The colours detailed have been tested for usability, visibility and consumer engagement. They are suitable for use across the various print and digital processes.

This colour palette contains Pantone and cmyk references for print, web references for online use and RAL and 3M Vinyl references for other uses such as vehicle livery, signage, vinyl lettering etc. The vinyl references have been carefully chosen to be the most widely available, off-the-shelf and cost-effective options.

Note: The colour blocks on this page and in use throughout these guidelines should not be assumed as accurate colour references. Refer to the relevant formula guidelines for each colour system.

Each material stream download contains the preferred wording for that material. However, you may replace this with your own wording, e.g. you might prefer to use 'drinks cans' instead of 'aluminium cans'.

In all cases you must seek prior approval from WRAP.

 **Artwork download**

To help you choose the most appropriate material streams icons for your applications, WRAP has provided a master iconography list which can be downloaded as a PDF file from www.recydenowpartners.org.uk

 **Guidance download**



Pantone 130 C
Process 0 30 100 0
Web #FDB812
RAL 1003
Vinyl 50-28 Apricot



Pantone Warm Red C
Process 0 90 100 0
Web #EE3F22
RAL 040 50 70
Vinyl 70-41 Warm Red



Pantone 300 C
Process 100 30 0 0
Web #0089D1
RAL 5015
Vinyl 50-84 Azure Blue



Pantone 3272 C
Process 100 0 45 0
Web #00A9A4
RAL 190 60 45
Vinyl 70-795 Dark Aqua



Pantone 3272 C
Process 100 0 45 0
Web #00A9A4
RAL 190 60 45
Vinyl 70-795 Dark Aqua



Pantone 4645 C
Process 30 50 60 0
Web #B7886E
RAL 060 60 20
Vinyl 100-39 Tan



Pantone 338 C
Process 60 0 35 0
Web #5BC4B6
RAL 180 80 25
Vinyl 50-792 Aqua



Pantone 292 C
Process 50 10 0 0
Web #74BEEB
RAL 250 70 25
Vinyl 70-81 Soft Blue



Pantone 354 C
Process 80 0 80 0
Web #18B26A
RAL 150 60 60
Vinyl 50-745 Bright Green



Pantone 4635 C
Process 20 60 80 30
Web #985D35
RAL 060 40 30
Vinyl 50-917 Dark Sahara



Pantone 431 C
Process 20 0 0 70
Web #54656F
RAL 7031
Vinyl 50-96 Grey



Pantone Black C
Process 30 30 30 100
Web #000000
RAL 9005
Vinyl 50-12 Black



Pantone Magenta C
Process 0 100 0 0
Web #ED008C
RAL 4010
Vinyl 50-64 Pink



Pantone 266 C
Process 75 75 0 0
Web #5B56A6
RAL 300 40 45
Vinyl 50-66 Purple



Pantone 021 C
Process 0 53 100 0
Web #F78F1E
RAL 2008
Vinyl 50-32 Orange



Pantone process yellow C
Process 0 0 100 0
Web #FEF200
RAL 1026
Vinyl 50-24 Lemon Yellow
Note: for icon and text use Black



Pantone Black C
Process 30 30 30 100
Web #000000
RAL 9005
Vinyl 50-12 Black

Material streams with illustrations

Providing clear instructions that make recycling as easy as possible will encourage good recycling behaviour. The material streams imagery should be used to reinforce the importance of collecting and correctly disposing of the desired materials.

To offer flexibility we have provided an alternative range of imagery using clear and unambiguous illustrations for each of the material streams.

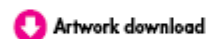
Usage

You are free to choose whether to use the imagery based on the recycle icon or the illustrations. The choice may depend on the requirements of the particular application, e.g. communications, bin stickers, signage etc.

For example, the illustrated versions might be appropriate where a significant proportion of local residents do not speak English as a first language.

The same restrictions on colour, size, positioning etc. apply equally to the illustrated material streams as to the icon-based streams.

Note: Orange is used for items and materials which do not easily fit into the main material streams e.g. spectacles, furniture, beverage cartons.



Artwork download

Download the list of all available material streams icons from www.recydenowpartners.org.uk



Guidance download



Operational items



Microsoft Excel - WasteCalculatorLean.xls

File Edit View Insert Format Tools Data Window Help Adobe PDF

Type a question for help

86%

Arial 10

D29

INPUTS

1

Number of buildings	0	No.
Building Footprint	0	m2
Number of floors	0	No.

2

Choose a construction type closest to your project

Average (All building types)	Yes	Type Yes in only one cell Make sure No appears in the remainder
Average (Offices)	No	
Average (Residential)	No	
Innovative MMC Prefab Housing	No	
Steel and Glass Office	No	

OUTPUTS

7

Cost of one skip system waste removal	£0.00
Money spent adding multiple skip system	£0.00
Revised cost of reduced mixed skip system	£0.00
Total money saved:	£0.00
Predictable Volume of waste generated by Project	0 m3
Volume potentially diverted from landfill	0 m3
Volume diverted with chosen waste streams	0 m3
Weight of waste on project	0.00 tonnes
Weight of waste potentially diverted from landfill	0.00 tonnes
Weight diverted with chosen waste streams	0.00 tonnes
% diverted from landfill (by tonnage)	100%

3

Potential Waste Segregation/Reclaim & Reuse/Recycling Streams

WAS+ICE Colour system

No Segregation (Mixed incl. Hazardous)

Inert	No
Mixed metal	No
Mixed (non Hazardous)	No
Timber	No
Packaging	No
Compactable	No
Plasterboard	No
Hazardous	No
Total number of waste streams proposed for contract	1

4

Add or replace rates with local collection rates £/tonne

£15.00
£25.00
£75.00
£25.00
£15.00
£15.00
£25.00
£600.00
Local waste collection rates £/tonne

5

Number of 8m3 skips for each waste stream

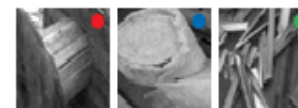
0 No.
0 No.
0 No.
0 No.
0 No.
0 No.
0 No.
0 No.
0 No.
0 Total
Total number of 8m3 skips

6

Potentially Reusable or recyclable m3

0 m3
0 m3
0 m3
0 m3
0 m3
0 m3
0 m3
0.0000 m3
0 Total
Potentially Reusable or recyclable m3

Draw AutoShapes



- [WHO](#)
- [WHAT](#)
- [WHY](#)
- [HOW](#)
- [WHERE](#)
- [POSTER CREATOR](#)

Waste Aware Construction



Waste Stream Colour Coding

Waste stream colour coding has been identified by the Construction Industry as an integral part in raising Waste Awareness, separating waste at the source, reducing the amount of construction waste sent to landfill, and providing cost savings to construction companies.

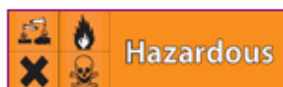
"As a country, we are embarking on a massive thrust to increase recycling rates and all sectors must play their part. This is particularly true of construction which in tonnage terms accounts for around a quarter of all waste produced. Standard coding is vital so that in time everyone on site will react subconsciously to a colour and symbol on a skip and only placing in it what the colour suggests it should contain. Result: Automatic segregation, and improved quality of material recovered."

Peter Gerstrom, Chairman, ICE Waste Management Board

An Industry led, generic colour coding scheme has been developed by the [Institution of Civil Engineers \(ICE\)](#) for use in the Construction Industry. This has been adapted in our Case Study to provide site specific information and direction for Construction Industry employees.

Click on any colour code example to view full size image.

▶ **Hazardous**
Colour: **Orange**



▶ **Inert**
Colour: **Grey**



▶ **Metal**
Colour: **Blue**



▶ **Mixed**
Colour: **Black**



▶ **Packaging**
Colour: **Brown**



▶ **Gypsum**
Colour: **White**



▶ **Wood**
Colour: **Green**



▶ **Compactor Only**
Colour: **Yellow**


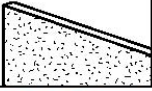

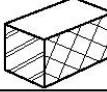
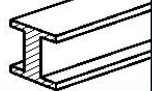
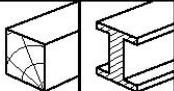





*Example of infrastructure specific material



		<h1>Hazardous</h1>
		
EWC Code(s): 15.01.10		

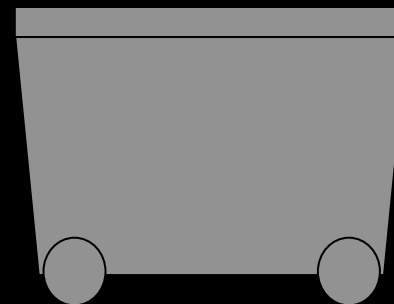
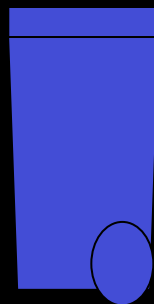
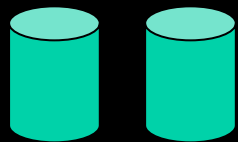
Empty Paint Tins Only

	Biohazard
	Gypsum
	Hazardous
	Inert
	Metal
	Mixed
	Packaging
	Plate Glass
	Wood

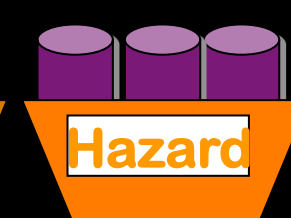
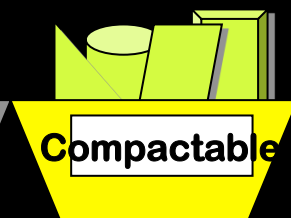
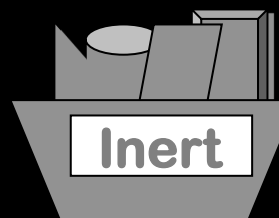


Colour code Poster Campaign

In site offices



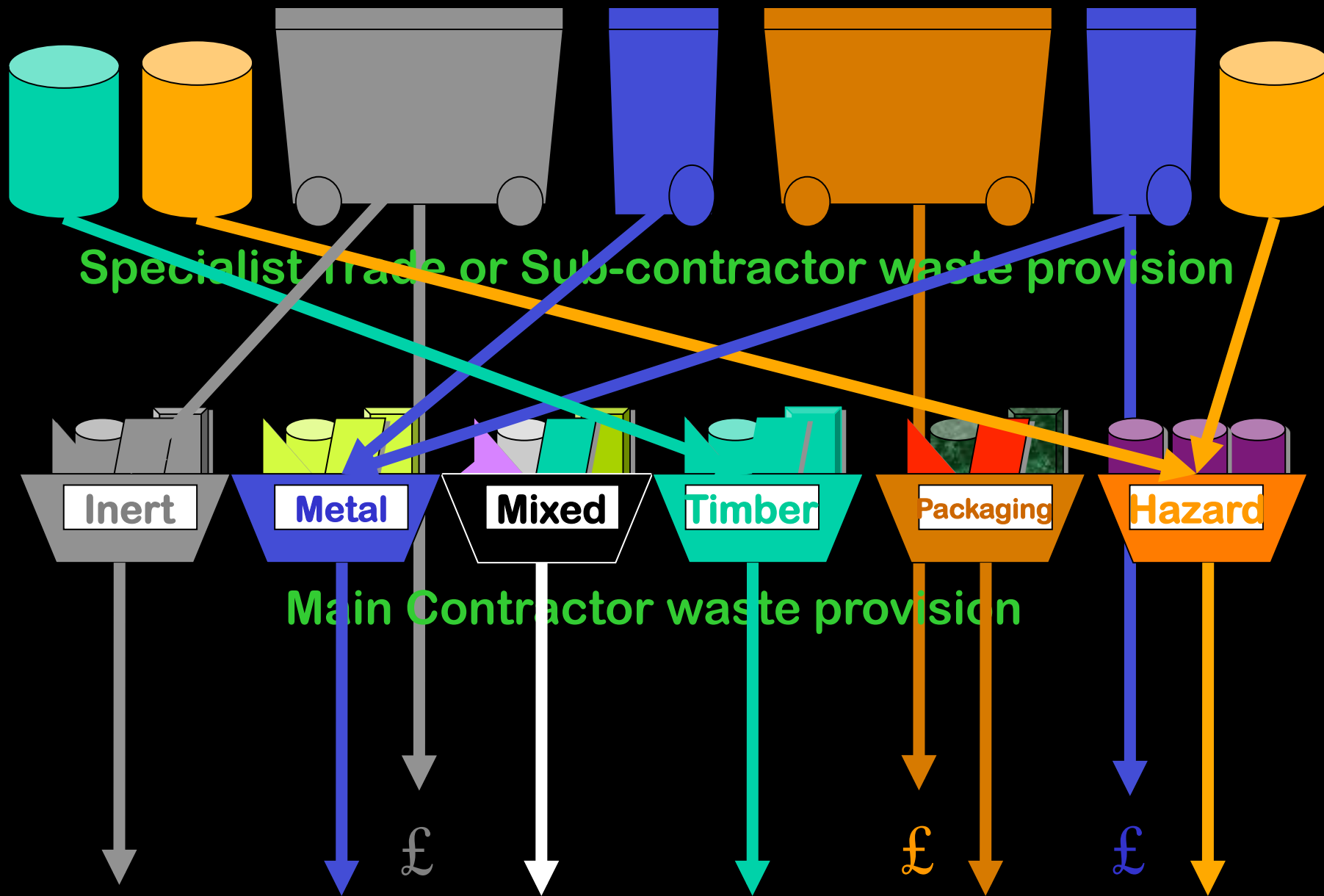
Local to point of creation

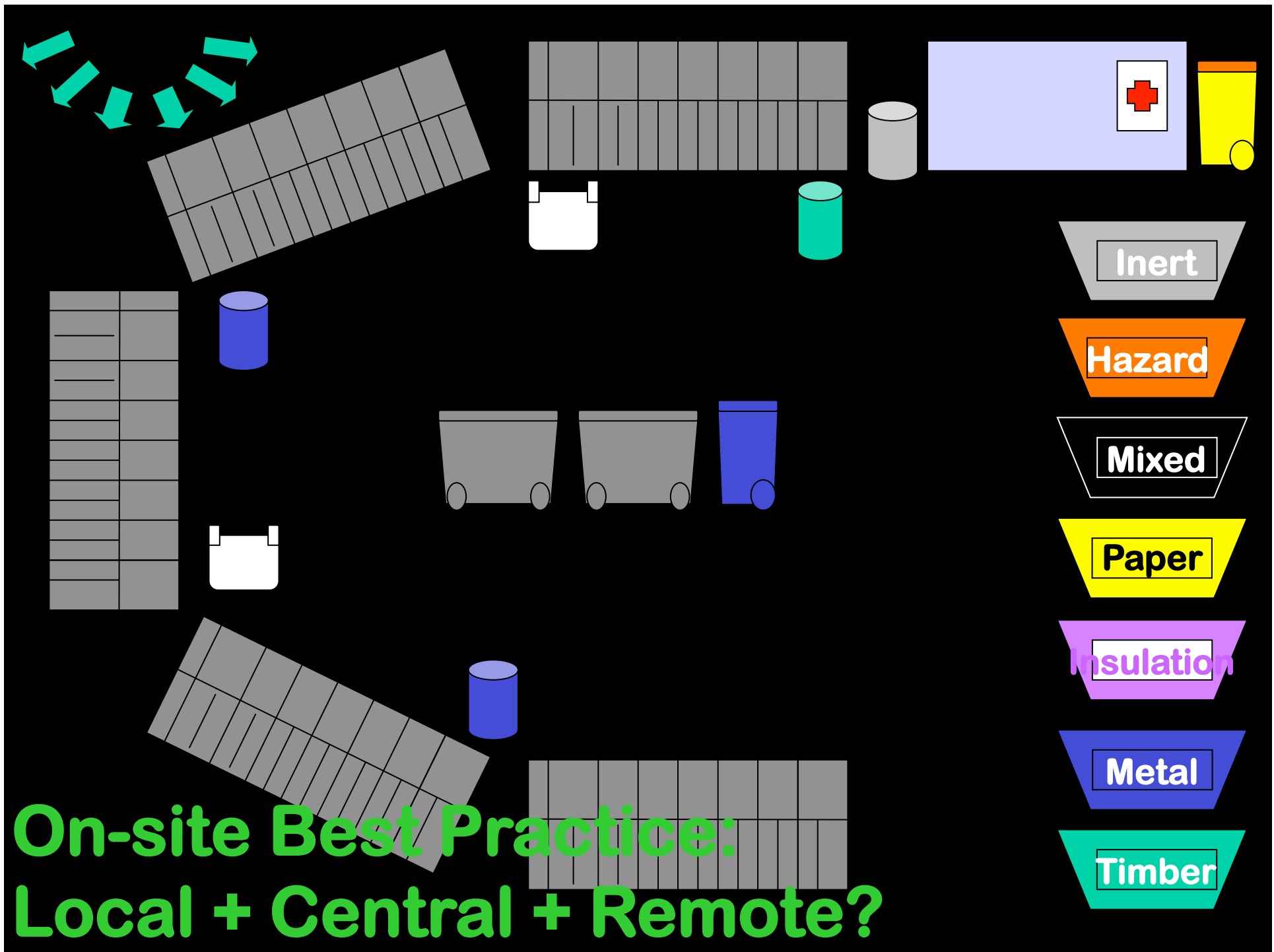


Centralised for segregated bulking



Remote for easy vehicle access

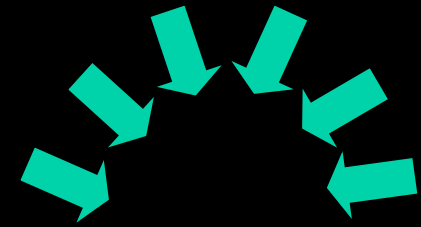
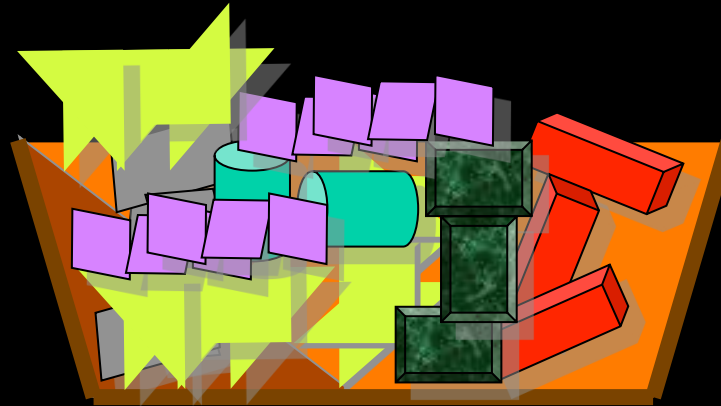






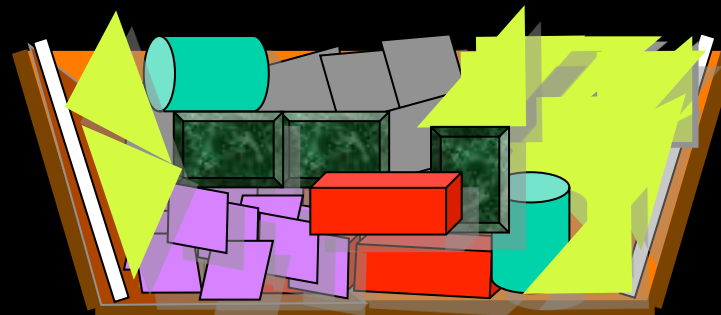
Local Waste Segregation

Each sub-contractor responsible for own waste
Each generating different waste to each other
Isle of Dogs Canary Wharf © NGS



45% air voids
And much outside
of skip volume

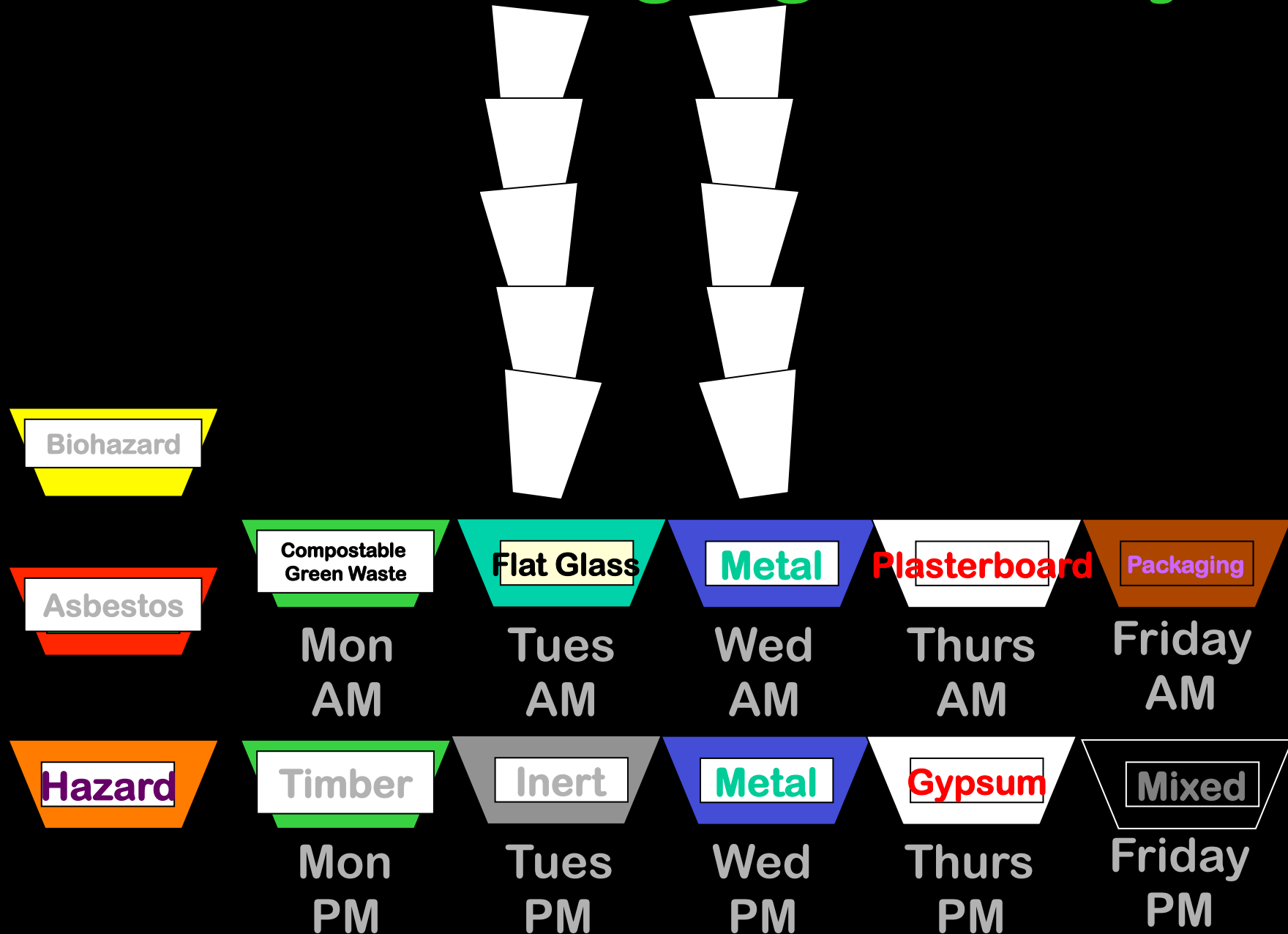
On-site Poor Practice: Filling



Well filled

On-site Best Practice: Filling

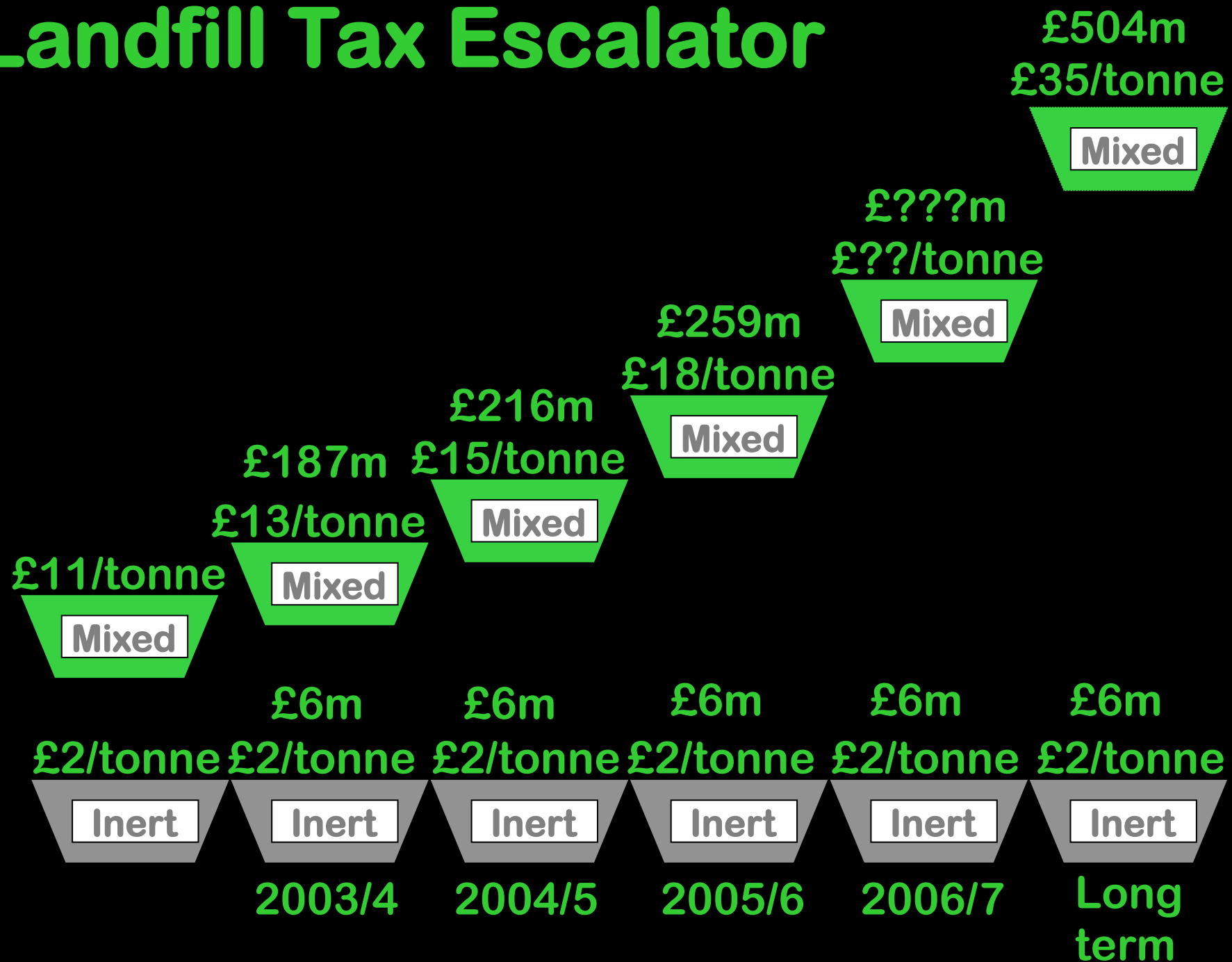
Waste Chute Segregation days

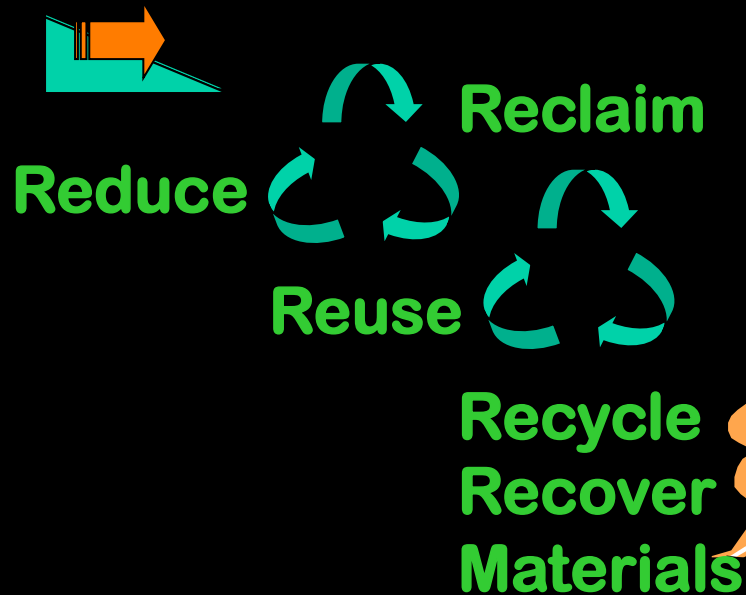


Easy Access Drop End



Landfill Tax Escalator





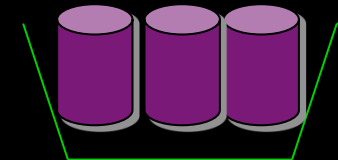
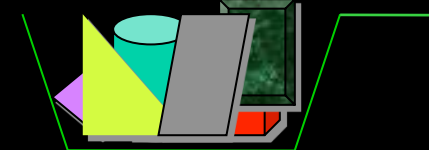
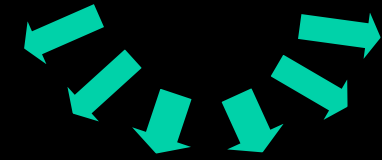
Incinerate to Recover Energy

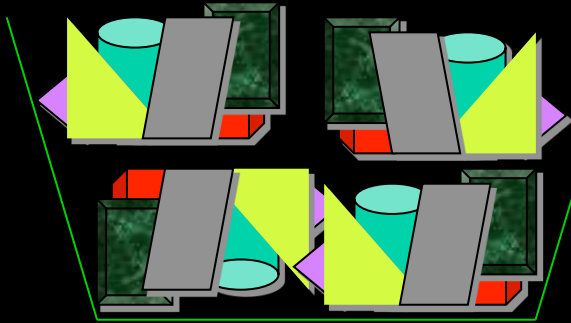
Segregated/Inert

Mixed waste

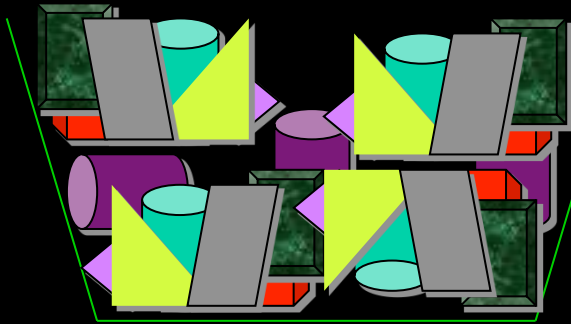
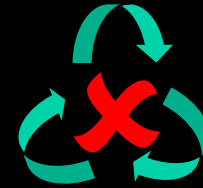
Best Good Normal Bad
Practice

Hazardous waste



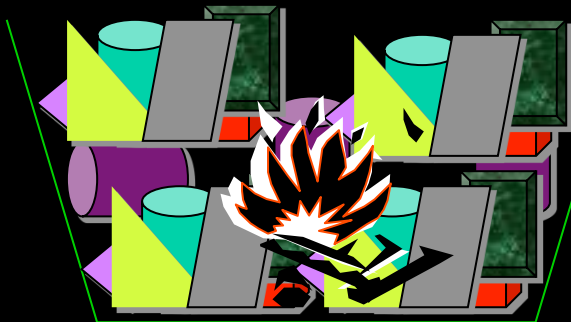


Methane created
Mixed waste
Leachate released



Mixed waste
Hazardous waste

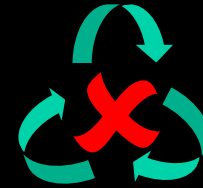
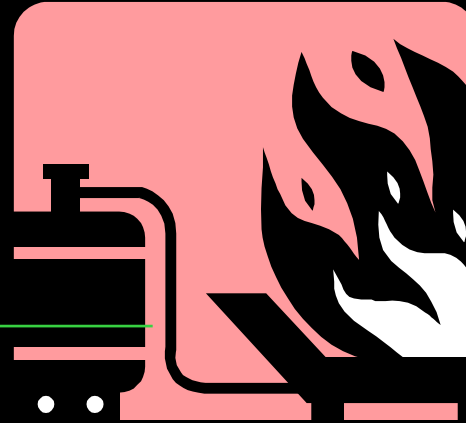
Little or no
Opportunity to
Recycle and
Recover
Materials



Mixed waste
Hazardous waste
And Combustion

Bad Landfill Practice

Cap site
Bottle the Methane
Use for fuel



Little or no
Opportunity to
Recycle and
Recover
Materials

Impervious wall
Drained cavity

Collect Leachate
Move to hazardous waste landfill

Mixed waste

Better Landfill Practice

Materials Protection:

Full hbmpp scheme

No absorbent surfaces

Corner Protection

Stability bracing

Moisture control

But:

Rain Cover needed

Not Remote storage

Not off the ground

Not JIT but JIC



BedZED Beddington Sutton Architect: Dr Bill Dunster









05/08/2013

35















Domestic Waste + Skip Fires

Close to boundary: invitation to local ASBO residents



05/08/2013

© NGS 2006 Waste Transfer Station WasteCycle Ltd.

43





05/08/2013

© NGS 2006 Waste Transfer Station WasteCycle Ltd.

45





05/08/2013

47



05/08/2013

© NGS 2006 Waste Transfer Station WasteCycle Ltd.

48



05/08/2013

49





Rear End Loaders & 4 Wheel bins
© North Norfolk

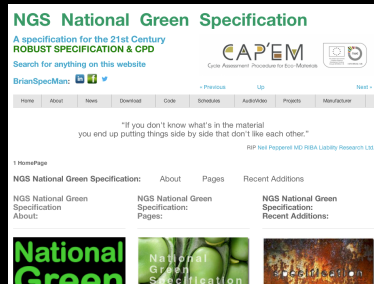


REL Rear End Loaders

© North Norfolk





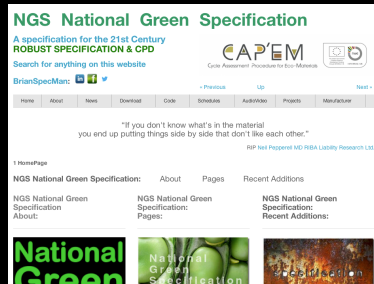


www.capem.eu



Feedback

- These files are created by generalists with a big dollop of green flavour
- These files are updated from time to time
- We are not experts so from time to time these file may get out of date or may be wrong.
- If you feel that we have got it wrong please let us know so we can put it right



www.capem.eu



© NGS _____

- **Brian Murphy BSc Dip Arch (Hons+Dist)**
 - Architect by Training
 - Specification Writer by Choice
- **Greening up my act since 1999**
- **Founded National Green Specification 2001**
- **Launched www.greenspec.co.uk 2003**
- **Created: NGS at www.greenspecdownload.co.uk 2012**
- **E BrianSpecMan@aol.com**
- **Twitter: <http://twitter.com/brianspecman>**
- **Scribd: www.scribd.com/brianspecman**
- **Facebook: <http://www.facebook.com/brianspecman>**