



Waste Category Group

London, 6th March 2019



Summary

1. The initial scoping meeting was held on 6th March to discuss the following points around waste and material efficiency to start shaping the work of this Group:
 - What are the key issues – risks and barriers – with waste and resource efficiency / circular economy relevant to built environment?
 - Which materials / waste streams are of concern / priority?
 - What measurement issues are there with waste that we can tackle?
 - Who are the key stakeholders, why, and how they should be engaged?
 - Who else should be in this Group: new Partners?
 - What outcomes do you need for you and your Supply Chain?
 - What material outputs do you need, including learning & development?
 - What subgroups might we need, e.g. plastic packaging?
 - Opportunities, innovation and other issues & ideas
2. The input from that meeting (the notes of which are provided in the Annex below) has been distilled into practical working subgroups to address the main topics. These are as described below:

Proposed Approach

- To divide the work into three ‘horizontal’ sub-groups with representatives from each of the School’s ‘Markets’ working in each subgroup, as below, facilitated by the School.
- This will enable consensus and consistency of approach across the sector for each subgroup topic whilst allowing each Market to make its particular contribution.
- Each subgroup to have its own sub-Chair who ‘reports’ to an overall Group Chair.
- Regular subgroup meetings to progress discrete activities and work, with less frequent All-Group meetings to update and inform the wider Group
- The following slides describe the proposed subgroups, their suggested activities and outputs. These to be refined and agreed by each subgroup.

Mapping & materials				
Procurement & supply chain engagement				
Measurement & Reporting				
	Infrastructure	Homes	Commercial	FM

Proposal for Subgroups

■ Strategic and cross-cutting subgroups:

1. Mapping and materials:

- Map the landscape of activities and initiatives across other (non-School) groups, agree what can be shared, who to engage (see slides 14 & 15), and analyse gaps on where School can add benefit and learning to the Supply Chain;
 - Output: mapping out activities and assessment / proposal of where School can add value
- Consolidate data on priority materials and analyse for what can be done to reduce waste / increase circular economy outcomes;
 - Output: identification of key wastes / materials (see slides 11 & 12), relevant across the School's Markets. Guidance on how to be more efficient and reduce waste
- Review material exchange portals (availability, cost, quality and access) and develop proposal for increased awareness and uptake of them;
 - Output: Guidance to supply chain on which material exchange portals exist, where and how to get value from them
- Engage stakeholders as appropriate

Proposal for Subgroups

■ Strategic and cross-cutting subgroups :

2. Procurement and supply chain engagement:

- Develop set of consistent tender questions, selection and award criteria, and contract clauses, including performance reporting process (see measurement).
- A focus on the fact that ~80% of impacts are built in at the design stage. So this enables the engagement of the Client and Design community to design out waste from the start by taking a view across the life cycle from design to build, through use to demolish. It will help to embed a circular approach to resource consumption by considering material choices and alternatives, standard sizes, recycled content, less packaging, recyclability of materials and DfMA.
 - Output: template / boiler plate procurement guidance on addressing resource efficiency, designing out waste from the outset and embedding circular economy approaches through procurement
- Through procurement contract management we can start to engage on behaviours with respect to material use, efficiency and wastage
 - Output: Supply Chain user guidance on good behaviours with respect to resource efficiency, reduced consumption and effective recycling
- Engage stakeholders as appropriate

Proposal for Subgroups

■ Strategic and cross-cutting subgroups :

➤ **Measurement and Reporting:**

- Develop set of consistent metrics and KPIs (incl. conversion factors), choice of standard(s), targets for the KPIs (see slide 13), and
- Ensure a more circular approach to measurement: valuing the material not the waste; considering more than just diversion from landfill - key issues such as natural capital and carbon; more inclusion of supply chain;
 - Output: set of consistent sector wide metrics and KPIs that are more forward-looking
- Develop user guidance on accurate data collation, quality and reporting
 - Output: online guidance / learning for Supply Chain members to improve their skills at collecting and submitting accurate data.
- Engage stakeholders as appropriate

Next Steps

- Collect feedback and refine – by 19th April for feedback
- Set up three subgroups and arrange meetings, f2f in first instance but also virtual as work progresses, to
 - Choose ‘sub’-Chair
 - Discuss and agree scope, objectives and outputs, based on the proposals
 - Assess what can be delivered in this year and hence a more detailed programme of work
 - Bring Partner representatives to the subgroups: Participation from all School ‘markets’
 - Start work thereafter as soon as possible
 - Update programme of work as necessary as things develop
- Further ahead: develop Comms plan to engage the School members

Annex – Summary Notes of Meeting 1

To Discuss in Groups

1. What are the key issues – risks and barriers – with waste and resource efficiency / circular economy relevant to built environment?
2. Which materials / waste streams are of concern / priority? *
3. What measurement issues are there with waste that we can tackle? **
4. Who are the key stakeholders, why, and how they should be engaged?
5. Who else should be in this Group: new Partners?
6. What outcomes do you need for you and your Supply Chain?
7. What material *outputs* do you need, including learning & development?
8. What subgroups might we need, e.g. plastic packaging?
9. Opportunities, innovation and other issues & ideas

* “Certain materials in the construction and demolition sector – The full list of products and materials in scope are yet to be defined, and will be subject to further review and consultation”, Defra Waste Strategy section 1.1 p.39

** Defra waste strategy: measurement to move away from tonnages to environmental impacts based on GHG emissions and Natural Capital impacts. Defra Waste Strategy section 3.2 p.77

Feedback on Issues

Each table to feedback on:

- Key issues
- Common themes
- Emerging consensus
- Resulting activities
- Anything else



9 stations; 3 mins each

Key Issues, Risks & Barriers

- Direction on packaging, and plastics in particular – lack of policy
- Geographical distribution of waste mgmt. infrastructure
- Culture and behaviour towards waste and resource efficiency
- Too much focus on EoL disposal, when it should be on design
- Reality of material exchange initiatives: cost, availability, quality
- Costs to manage waste vs perception of low value: WLC
- Responsibility to manage out waste / become more efficient
- Difficult waste streams vs lack of innovation to solve problems
- Balance between reducing packaging vs ensuring undamaged product
- Quality standards and insurances for reused/ recycled materials
- Definition of waste vs lack of regulatory enforcement
- Too much focus on landfill diversion and reliance on EfW: CE

Priority Materials/ Waste streams

- Soils: Topsoil & Subsoil (develop understanding of why and when soil is classified as a waste and then develop guidance for it)
- Aggregates and concrete
- Metals
- Glass
- Plastics, incl. protection & and single use plastics such as packaging
- Timber and wood waste incl. pallets, cable drums
- Plasterboard
- Haz waste such as paint
- Others: carpets, furniture, electronic
- Mixed Waste – does this have a definition, or is it a catch all? develop understanding of why mixed waste is a stream
- Unused / out of spec / obsolete materials and products
- Needs prioritising – see next slide

Construction Waste streams

Year	EWC-STAT co	EWC-STAT description	Hazardous/Non-hazardous split	Construction	% of total
2016	Total	*Total waste generation	Total	136,196,492	
2016	12.1	Mineral waste from construction & demolition	Total	63,525,298	46.64%
2016	12.6	Soils	Total	58,234,031	42.76%
2016	12.7	Dredging spoils	Total	11,245,716	8.26%
2016	06.1	Metallic wastes, ferrous	Total	1,129,527	0.83%
2016	06.3	Metallic wastes, mixed	Total	688,085	0.51%
2016	07.5	Wood wastes	Total	664,644	0.49%
2016	06.2	Metallic wastes, non-ferrous	Total	298,915	0.22%
2016	07.1	Glass wastes	Total	129,165	0.09%
2016	10.1	Household & similar wastes	Total	71,296	0.05%
2016	07.4	Plastic wastes	Total	67,445	0.05%

- Published in March 2019 and based on 2016 input data, this shows the top 10 construction waste streams by mass. They account for 99.9% of all construction waste, of which 99.4% is non-hazardous. It clearly shows that:
 - Mineral wastes (typically bricks, stone and road planings that are converted into usable aggregates), soils and dredging are the primary categories by tonnage
 - Metallic wastes are next most significant category
 - Plastics comes in at 10th with 67,445 tonnes, whilst 'Mixed and undifferentiated material' come in 17th with 3,562 tonnes

[UK_Statistics_on_Waste_dataset_Mar_2019_rev_FINAL](#)

<https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management> and

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/784263/UK_Statistics_on_Waste_statistical_notice_March_2019_rev_FINAL.pdf page 14

Measurement

- Consistent metrics, standardised across the industry (e.g weight vs volume). Better / more use of PAS 402, or ENCORD Waste Protocol, or BREEAM metrics and KPIs? Simplification.
- Standardisation of reporting frameworks, that build on the standard metrics, above. Better / more use of PAS 402.
- Enabling accurate data – training and competence development of where to get data from, how to assess its reliability and how to report it accurately.
- Smarter, more circular approach to measurement: valuing the material not the waste; considering more than just diversion from landfill; more inclusion of supply chain; key issues such as natural capital, carbon...
- More development and use of material / product EPDs and LCA: cost barrier

Key Stakeholders

- **Waste Contractors**
- **Trade Feds & Associations:** UKGBC; CIRIA; Build UK; CECA; CCS; IEMA; Green Construction Board; MIROG; Ellen MacArthur Foundation; ASBP; House Builders Federation; National Builders Association; Construction & Demo Waste Contractors Group / Environmental Services Association / National Federation of Demo Contractors; Wood Recyclers Association; Construction Products Association; Material Products Association (incl Concrete Centre); British Plastics Federation, Valpac; Rail Infrastructure Sustainability Forum; CIWM, CL:AIRE
- **UK Government:** Defra & EA, BEIS, WRAP/ZWS
- **Financial investors**
- **Other NGOs**

New Partners for Waste Group



- Seek Partners from across the value chain for resources and waste:
- Design Consultants & Architects: Motts, AECOM, Arups...
- Manufacturers and suppliers: products and packaging
- Waste Contractors: Powerday, GBN, Bywaters, McGrath, RSK, Veolia, Biffa, Suez

- Foster communication and collaboration to assess needs at each stage, establish where there are challenges, how we can overcome them and what the targets are we are trying achieve.

Outcomes and Outputs

■ Outcomes:

- Standardised & consistent approach for the sector...;
- ... including metrics and targets on reuse and recycling aligned to Govt;
- Design led resource efficiency and waste minimisation
- Tacit links to other working groups, e.g. offsite manufacture
- Measurable improvements / reductions in waste
- Partners sign the UK Plastics Pact

■ Outputs:

- Minimum requirements for consistency and to raise the level
- Procurement questions, evaluation criteria, and contract clauses
- Guidance & training on designing out waste, using less material / being efficient (incl. classification of wastes) and behaviours with waste mgmt.
- Best practice case studies and comms

Opportunities, innovation & other issues

- Develop better just in time delivery of materials
- Develop better / more successful material exchange hubs, built on UK-wide map of major projects, their surplus materials and locations
- Lease assets rather than own
- Clearer design specs and freeze on design
- More focus on waste in design phase – more holistic and circular economy
- Quantify top 5 materials / wastes in terms of tonnage, value, recyclability, CO₂, natural capital.
- SCSS to be voice of supply chain and feedback to clients, designers etc
- Use tech like blockchain to capture waste data in real time

Subgroups

- Subgroups on the key life cycle stages of design, build, demolish and how DfMA, BIM and other techniques play a role.
- Groups around materials such as soils, aggregates, bricks and blocks, plastics, packaging and the suppliers who work in these areas
- Groups by sector, e.g. housebuilders, infrastructure, construction and FM
- More strategic, cross-cutting and encompassing subgroups:
 - Mapping, materials and stakeholder engagement
 - Procurement and supply chain engagement
 - Measurement & Reporting