Review of contract practice in construction waste management

Including a summary of the current practice of contracting waste management companies by construction contractors, this report uses anecdotal evidence gathered from industry interviews, a review of standard construction contracts and feedback from stakeholders to recommend changes to contractual practice.
WRAP helps individuals, businesses and local authorities to reduce waste and recycle more, making better use of resources and helping to tackle climate change.


Written by: Rebecca Hooper, Lorna Eden (Scott Wilson) and Matt Rendell (Cyril Sweett)
Executive summary

To fill a gap in the contractual relationship between Waste Management Contractors and Construction Contractors, Scott Wilson and Cyril Sweet were commissioned by WRAP to develop model contract clauses for use by the waste management sector. Work undertaken included:

- Discussions with a stakeholder group;
- Face-to-face and telephone interviews with Waste Management Contractors and Construction Contractors;
- A review of standard construction contracts; and
- A review of standard terms and conditions of business for Waste Management Contractors.

Discussions with stakeholders indicate that most contracts are currently let through the standard terms and conditions of business of the Waste Management Contractor or the Construction Contractor. In general, Waste Management Contractors are happy with their standard terms and conditions of business and do not believe that these need to be improved. However, Waste Management Contractors did express a desire that terms and conditions of business should promote the use of good practice waste recovery and recycling practices, especially in the light of constructors increasingly responding to commitments to halve waste to landfill.

The terms and conditions of business from 12 Waste Management Contractors were reviewed in order to identify existing clauses which make reference to good practice recycling and recovery or to reporting and/or auditing recycling and recovery rates. None of the Waste Management Contractor's standard terms and conditions of business makes reference to a commitment to good practice or to reporting and/or auditing recycling and recovery rates.

Disappointingly, few standard contracts or subcontracts drive towards good practice in sustainability, environmental protection or waste management, although some do allow such matters to be addressed through performance indicators, targets and incentives. Exceptions are the clauses within the JCT Framework Agreement, the ACA Project Partnering Contract (PCP2000), and the FIDIC MDB Harmonised Conditions and Design, Build and Operate Conditions.

To conclude the work, Scott Wilson and Cyril Sweet have developed three model clauses for use in the standard terms and conditions of business of Waste Management Contractors:

**A commitment to good practice**

As a provider of good practice waste management operations, [Company Name] is committed to protecting the environment and to limiting the damage and nuisance to people and property resulting from pollution, noise and other results of its operations. [Company Name] is committed to assessing and improving upon environmental performance and sustainability and reducing environmental impact, including examining and implementing cost-effective options to:

- increase the recovery of materials from the incoming waste stream and reduce the residual waste sent for landfill disposal;
- work with customers to enable improved waste management;
- reduce carbon emissions and reduce energy consumption;
- reduce the use of natural and manmade resources and encourage the use of recovered materials.

**A transparent and auditable measurement system**

To reinforce its credentials as a provider of good practice waste management services, and to provide our customers with the confidence that reported recovery and recycling rates can be used with confidence, [Company Name] has a systematic process for recording data and calculating recovery and recycling rates. This process is subject to routine checks, the results of which, and any discrepancies and corrective actions, are recorded. The process for recording and reporting waste and recovery and recycling data, and the associated checking records and action reports are available for inspection by our clients upon request.

**A flexible reporting system**

To support our customers in meeting their contractual obligations [Company Name] is committed to providing routine reports of waste accepted, and facility recovery and recycling rates on a weekly, monthly and quarterly [delete as appropriate] basis. We welcome the opportunity to discuss reports with our customers, helping to improve waste management practices on site.
Glossary

ACA – Association of Consulting Architects
CC – Construction Contractor
FIDIC – Federation Internationale des Ingenieurs-Conseils (The International Federation of Consulting Engineers)
ICE – Institution of Civil Engineers
JCT – The Joint Contracts Tribunal Limited
MDB – Multi-Lateral Development Banks
NEC3 – New Engineering Contract 3
WMC – Waste Management Contractor
WRAP – Waste & Resources Action Programme

Acknowledgements

WRAP, Scott Wilson and Cyril Sweett would like to thank all the stakeholders who have contributed to this work – specifically the organisations listed below:

- 2b Consulting
- Avon Material Suppliers/ Commercial Recycling
- Ace Liftaway
- BAM Construction
- Carillion
- Commercial Recycling
- Costain
- Ethos Recycling
- Graham Construction
- Gypsum Recycling UK
- ISG
- Kier Construction
- J & M Murdoch
- JBT
- Lawrence Skip Hire
- Malcolm Construction Services
- McGrath
- Morgan Sindell
- Nick Brookes
- Oakdene Hollins
- North Midland Construction
- Pearsons (Thetford)
- Powerday
- Premier Waste
- Roy Hatfield
- Shanks Waste Management
- Smiths of Gloucester
- Vinci Construction
- Wastefile
- Wilson James
1.0 Introduction

In 2008, WRAP identified that there was little formal evidence for the existence of a standardised contractual ‘base’ within the construction waste management sector, and anecdotal evidence from Construction Contractors indicated that, whilst contracts exist between the client, contractors, and their sub-contractors, they do not necessarily extend to construction Waste Management Contractors. As a direct result of this gap, WRAP commissioned Scott Wilson and Cyril Sweett to work collaboratively to:

- Confirm current contractual practice in delivering waste management to the construction sector;
- Develop a better understanding of the potential for standardised contracts to deliver waste management sub-contracts; and
- Provide model contract clauses to encourage good practice in the sector - allowing Waste Management Contractors to improve their service to the construction sector.

To deliver this programme, Scott Wilson and Cyril Sweett undertook the following activities:

- Discussions of contractual practice and potential changes to practice with a stakeholder group comprising Waste Management Contractors and Construction Contractors;
- Face-to-face and telephone interviews with Waste Management Contractors and Construction Contractors to discuss standard and good contractual practice;
- A review of standard construction contracts between clients and Construction Contractors, Construction Contractors and sub-contractors, and clients and integrated supply chains, to establish if and how waste management requirements are embodied in such contracts; and
- A review of standard terms and conditions of business for Waste Management Contractors to determine how current practice might be improved.

To conclude the work, Scott Wilson and Cyril Sweett have developed three model clauses for use in Waste Management Contractors’ standard terms and conditions of business. These model clauses can be included by Waste Management Contractors to demonstrate they are committed to implementing good practice recovery at their facilities and are willing and able to provide auditable facility recovery rates to Construction Contractors and their clients.

Model Clauses for Waste Management Contractors

A commitment to good practice

As a provider of good practice waste management operations, [Company Name] is committed to protecting the environment and to limiting the damage and nuisance to people and property resulting from pollution, noise and other results of its operations. [Company Name] is committed to assessing and improving upon environmental performance and sustainability and reducing environmental impact, including examining and implementing cost-effective options to:

- increase the recovery of materials from the incoming waste stream and reduce the residual waste sent for landfill disposal;
- work with customers to enable improved waste management;
- reduce carbon emissions and to reduce energy consumption;
- reduce the use of natural and manmade resources and encourage the use of recovered materials.

A transparent and auditable measurement system

To reinforce its credentials as a provider of good practice waste management services, and to provide our customers with the confidence that reported recovery and recycling rates can be used with confidence, [Company Name] has a systematic process for recording data and calculating recovery and recycling rates. This process is subject to routine checks, the results of which, and any discrepancies and corrective actions, are recorded. The process for recording and reporting waste and recovery and recycling data, and the associated checking records and action reports are available for inspection by our clients upon request.

A flexible reporting system

To support our customers in meeting their contractual obligations [Company Name] is committed to providing routine reports of waste accepted, and facility recovery and recycling rates on a weekly, monthly and quarterly [delete as appropriate] basis. We welcome the opportunity to discuss reports with our customers, helping to improve waste management practices on site.
2.0 Stakeholder views

2.1 Face-to-face and telephone interviews
Scott Wilson and Cyril Sweett interviewed 13 Waste Management Contractors and 9 Construction Contractors to determine current contractual practice and how this might be improved. The Waste Management and Construction Contractors interviewed were selected because they were considered to demonstrate good practice waste recovery and recycling activities. A summary of the findings from the interviews is included below.

### Q: What types of contracts (and in what proportion) are used to procure waste management services?

<table>
<thead>
<tr>
<th></th>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard terms of business (Construction Contractor)</td>
<td>100%</td>
<td>95%</td>
</tr>
<tr>
<td>Standard terms of business (Waste Management Contractor)</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>Alternative terms of business/contract clauses set by the Construction Contractor</td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td>Alternative terms of business/contract clauses set by the Waste Management Contractor</td>
<td></td>
<td>50%</td>
</tr>
<tr>
<td>Good practice contractual clauses derived from WRAP templates</td>
<td></td>
<td>1%</td>
</tr>
</tbody>
</table>

**Summary**
100% of Waste Management Contractors provide their service using their standard terms and conditions of business. Several stated that they only use fixed contracts for short-term projects and this is very infrequent. The majority of Construction Contractors apply their standard terms and conditions of business to waste management sub-contracts; however, two contractors used different contracts. One stated that they mainly procure waste management services on the Waste Management Contractor’s terms and conditions of business. A second Construction Contractor used procurement practices promoted in WRAP publications for about 1% of their projects with the remaining 99% procured using their standard terms and conditions of business.

### Q: At what stage in the design/construction process are waste management services/contracts usually considered/procured?

<table>
<thead>
<tr>
<th></th>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the client brief for design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the client brief for construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>During the design phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the construction planning phase (e.g. at appointment of the principal contractor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At the start of construction (preliminaries)</td>
<td>10%</td>
<td>50%</td>
</tr>
<tr>
<td>During construction</td>
<td>90%</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Summary**
Waste Management Contractors stated they are generally procured during the construction process; sometimes at the start of construction. Construction Contractors share this opinion, procuring waste management services at the start of construction or during construction.
**Q:** At what stage in the design/construction process do you think waste management services/contracts should be considered/procured?

<table>
<thead>
<tr>
<th>Stage Description</th>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>In the client brief for design</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the client brief for construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>During the design phase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>In the construction planning phase (e.g. at appointment of the principal contractor)</td>
<td>80%</td>
<td>100%</td>
</tr>
<tr>
<td>At the start of construction (preliminaries)</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>During construction</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Summary**

Both Waste Management and Construction Contractors would prefer the procurement of waste management services earlier in the construction process, specifically within the construction planning phase. Construction Contractors noted that Waste Management Contractors can generally only be appointed after the Principal (Construction) Contractor is appointed, but also commented that Waste Management Contractors could feed back information to Designers so that minimising waste becomes part of the design process. Waste Management Contractors commented that if their role was considered in the design phase then better waste management could result – as the design strategy could include plans for waste storage and access for waste collection – which might be particularly important for smaller sites.

**Q:** Would it be helpful/possible for Waste Management Contractors to provide annual average recovery figures for each waste stream in construction, demolition and excavation waste?

<table>
<thead>
<tr>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>The majority of Waste Management Contractors provided average facility recycling rates; in some cases this information could be stream specific. One Waste Management Contractor stated that this data is always provided but often not appreciated.</td>
<td>All of the Construction Contractors agreed that this information would be helpful and believe that it is feasible for Waste Management Contractors to provide this information. Construction Contractors stated it would be particularly useful if monthly or quarterly figures were provided.</td>
</tr>
</tbody>
</table>

**Q:** Would it be helpful/possible for Waste Management Contractors to provide minimum guaranteed recovery figures for each waste stream in construction, demolition and excavation waste?

<table>
<thead>
<tr>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>The majority of Waste Management Contractors stated that it would be possible to do this, but concerns were raised because specific waste streams arising from a construction project are not easily pre-defined. There are also differences between how the recycling rates are calculated by different Waste Management Contractors. There may also be significant associated costs dependent on the waste types produced.</td>
<td>Construction Contractors were very interested in Waste Management Contractors providing a minimum guaranteed recovery. It was commented that there may need to be further assurances and potentially supporting evidence, so that Construction Contractors can have confidence in such recovery figures.</td>
</tr>
</tbody>
</table>
Q: Would it be helpful/possible for Waste Management Contractors to provide extended services by working with specialist recyclers (e.g. plasterboard, plastics)?

<table>
<thead>
<tr>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almost all of the Waste Management Contractors stated that they already provided specialist services; materials listed include plastics, plasterboard, wood and metal. One Waste Management Contractor is currently setting up this service for a new waste management facility and is researching specialist recyclers to work with.</td>
<td>Half of the Construction Contractors expected Waste Management Contractors to provide this service. The other half of the Construction Contractors agreed that it would be very helpful to provide extended services.</td>
</tr>
</tbody>
</table>

Q: Would it be helpful/possible to have Waste Management service contracts across a range of smaller construction sites?

<table>
<thead>
<tr>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generally Waste Management Contractors will only provide a mixed waste skip service to small construction sites. Extras, such as data on project specific recycling and recovery rates, are seen as too time consuming and thus expensive. Waste management contracts to service multiple smaller construction sites are only seen in very few cases.</td>
<td>Half the Construction Contractors thought it would be possible to service smaller sites, dependent on costs; half thought it would not be cost effective and did not procure a Waste Management Contractor for smaller construction sites.</td>
</tr>
</tbody>
</table>

Q: Would it be helpful/possible for Construction Contractors to provide more detail (specifically related to the List of Wastes codes, also known as European Waste Catalogue (EWC) codes) on the Waste Transfer Note?

<table>
<thead>
<tr>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>All the Waste Management Contractors agreed that it would be helpful for Construction Contractors to provide more detail on their wastes; they believe that requiring more detail would also increase awareness of what waste is generated, would make Construction Contractors take more responsibility for their waste, and would improve awareness of good waste management principles.</td>
<td>The majority of Construction Contractors agreed providing more detail would be beneficial, but some companies did say that they were already well-informed and provide the relevant codes on Waste Transfer Notes.</td>
</tr>
</tbody>
</table>

Q: Would it be helpful/possible for Construction Contractors to include minimum requirements for waste recovery in contracts and tenders (to ensure good practice is adopted)?

<table>
<thead>
<tr>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Waste Management Contractors agreed that providing minimum recovery requirements in tenders and contracts would be useful because it would provide further business opportunities for those Waste Management Contractors offering good practice services and would enable waste impacts to be considered from the beginning of the project. This process also encourages Construction Contractor communication which makes waste management more straightforward.</td>
<td>The majority of Construction Contractors responded positively saying this information would be helpful, but that they were unsure about the quality and scope of the data supplied to the Environment Agency (EA) and would have concerns about this being used as the basis for minimum requirements in contracts; more assurance relating to recovery figures would be welcomed by Construction Contractors. One Construction Contractor suggested that Waste Management Contractors are best placed to identify appropriate levels of waste recovery.</td>
</tr>
</tbody>
</table>
Q: How else might Construction Contractors’ contracts and/or terms of business be amended to improve waste recovery?

<table>
<thead>
<tr>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Management Contractors suggested that a better understanding and awareness of the List of Waste codes and of the recovery process would be beneficial. It would be helpful to draw in Waste Management Contractors at the start of the contractual process to enable them to provide better waste data. In addition, using recycled materials in new construction would be helpful in developing markets for recovered materials.</td>
<td>Construction Contractors suggested investment into waste recovery practices, as well as employee bonuses linked to wastage and recovery rates, should be considered since influencing waste is becoming more important to their clients. Another suggestion looked at setting contract terms for Waste Management Contractors stating recovery rates.</td>
</tr>
</tbody>
</table>

Q: How else might Waste Management Contractor’s terms of business be amended to improve waste recovery?

<table>
<thead>
<tr>
<th>Waste Management Contractor</th>
<th>Construction Contractor</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Waste Management Contractors indicated that their terms of business were adequate and no changes were needed.</td>
<td>Construction Contractors suggested the Waste Management Contractor’s terms of business might be amended to improve:</td>
</tr>
<tr>
<td></td>
<td>- Better business efficiency in terms of skip delivery punctuality;</td>
</tr>
<tr>
<td></td>
<td>- Improved auditing of recovery rates reported to the Environment Agency and provision of information for audit purposes;</td>
</tr>
<tr>
<td></td>
<td>- Providing facility recycling rates and stream specific recovery data.</td>
</tr>
<tr>
<td></td>
<td>In addition, the Construction Contractors suggest that Waste Management Contractors could differentiate/promote their businesses based on auditable recovery rates; and that Construction Contractors should visit Waste Management Contractors more frequently and improve communication in all project phases.</td>
</tr>
</tbody>
</table>
2.2 Stakeholder workshop 1
WRAP, through Scott Wilson, hosted a workshop for leading Waste Management Contractors that operate in the construction waste management sector. This workshop addressed a range of issues pertinent to construction waste recovery, such as procurement and contract practice, data recording and reporting, and UK and European waste recovery practice. The workshop was delivered through a series of introductory presentations and facilitated discussions. The summary of the discussions relevant to procurement and contractual practice are reproduced below.

<table>
<thead>
<tr>
<th>Question</th>
<th>Summary Responses</th>
</tr>
</thead>
</table>
| What waste management services do you provide to the construction sector and how does this compare to services being requested by Contractor? | - Mixed or source segregated waste services - as requested by the Construction Contractor or client.  
- Wide range of skips, containers and bags.  
- Some Waste Management Contractors offer collection and management services. Others accept waste from third party collection companies at their material recovery facilities.  
- More Construction Contractors are reverting to using mixed waste services now that they see the quality of the facilities and services that the waste management industry has to offer.  
- Services provided by Waste Management Contractors are usually above and beyond the level of service expected by the Construction Contractor. The Construction Contractor often does not know what they need or want in terms of waste management, and does not have a good understanding of what can be offered. |
| What is your usual contractual relationship with the Construction Contractor/waste producer (for example direct contract, via a broker, waste carrier or another waste management company); what contractual requirements are usually asked of you (such as Environmental Management Systems, recycling rates, data reporting)? Do clients issue contracts/conditions, or do you issue them with your terms of service? | - Some Waste Management Contractors only contract directly with the Construction Contractor or client.  
- Some Waste Management Contractors no longer work for waste brokers, whereas others do a proportion of their work (up to 50:50) through this route. Most are trying to reduce the amount of work that is done through brokers and are increasingly carrying out this role themselves. It may be that the Construction Contractors are not aware that the broker is not the eventual Waste Management Contractor.  
- The contractual relationship and conditions depend upon the individual Waste Management Contractor and the Construction Contractor or client. For most short term/ad hoc waste management services the Waste Management Contractor’s conditions of service are used; for long-term/framework services, the Construction Contractor usually defines the contractual conditions.  
- Where a broker is involved, conditions are dictated by the broker. |
| At what point in the development of a construction/demolition project does your involvement usually start (for example, during design, once site work has started), and how does this affect the services you can offer? | - None of the Waste Management Contractors have ever been approached by the client or Construction Contractor to contribute at the design phase of a project.  
- Involvement in a project usually starts when the Construction Contractor has been appointed. Sometimes waste management services are provided on an on-demand/ad hoc basis.  
- Some Waste Management Contractors actively seek out new opportunities when projects are at the planning or design stage in order to secure the business.  
- If Waste Management Contractors involvement started at design stage, more advice could be given in terms of suitable waste management provision and technique. The Waste Management Contractors feel they have a lot to offer in this area and are ready to deliver this service.  
- Often Waste Management Contractors involvement is reactive rather than proactive. |
2.3 Stakeholder workshop 2
A second stakeholder workshop was hosted by WRAP and Scott Wilson for leading Waste Management Contractors and Construction Contractors, to validate some of the findings from face-to-face interviews, to review some suggestions for improvements in contractual practice, and to discuss the barriers to behavioural change within the Construction Contractor/Waste Management Contractor interface.

Two concepts to change current contractual practice were posed to the attendees:

1. To provide information on the List of Waste codes alongside Waste Management Contractors’ standard terms and conditions to focus the minds of Construction Contractors when filling skips and completing Waste Transfer Notes.

   This idea was not supported by delegates who raised the following concerns:
   - Codes were not helpful and would create more confusion than they resolved;
   - The information provided on the Waste Transfer Note was currently adequate and did not need to be enhanced;
   - Waste Management Contractors confirm the relevant code when the skip is ordered and the waste in the skip should match the code – particularly if segregated;
   - Providing additional information on codes would not be effective – better approaches are to provide toolbox talks to staff, colour coded skips, and other staff initiatives; and
   - Effective waste management needs to be considered earlier in the procurement process – by involving Waste Management Contractors earlier and ensuring effective on site waste management.

2. Introduce contractual clauses that set requirements on both Waste Management Contractors and Construction Contractor – to demonstrate commitment on both sides – and at two levels, good practice and best practice, to provide flexibility to meet the project specific requirements and the aspirations of the client and Construction Contractor.

   This idea was not supported by delegates who raised the following concerns:
   - Contract clauses need to set requirements that favour good practice Waste Management Contractors but which do not establish restrictive requirements; and
   - Contract clauses need to be kept simple but be based on strategic agreements with Construction Contractors.

3.0 Discussion of findings from the stakeholder feedback

Most contracts are currently let through the standard terms and conditions of business of the Waste Management Contractor or the Construction Contractor. Note that this project (MRF 119) is focusing on the terms and conditions of business used by Waste Management Contractors. Other WRAP projects (particularly WAS 800-003) are focusing on the contractual relationship driven by Construction Contractors.

3.1 Waste Management Contractor terms and conditions of business
In general, Waste Management Contractors are happy with their standard terms and conditions of business and do not believe that these need to be improved. Although a desire to improve the use of List of Waste codes was expressed in face-to-face interviews and within the initial workshop in December 2008, amending the terms and conditions of business or documents that also carry these terms and conditions of business (such as delivery notes) to provide information on List of Waste codes was considered inappropriate.

Waste Management Contractors did express a desire that terms and conditions of business should promote the use of good practice waste recovery. Hence, revised clauses for Waste Management Contractors terms and conditions of business should consider including a commitment to good practice. As Construction Contractors, in face-to-face interviews, expressed concern that recovery rates were not measured in a consistent and auditable manner, revised clauses could also include a commitment to publish and allow audit of recovery rates. Such clauses could be developed through the current project (MRF 119) and reported here.

3.2 Construction Contractor procurement and contracts
Currently, waste management sub-contracts are mainly procured using the Construction Contractors terms and conditions of business. This suggests that similar contract clauses proposed for the Waste Management Contractors terms and conditions of business could be used by Construction Contractors to confirm the expectations of their waste management sub-contractors, and would drive Construction Contractors to use only
good practice Waste Management Contractors (as poorly performing Waste Management Contractors would be unable to meet these terms and conditions of business).

In general, Construction Contractors and Waste Management Contractors expressed a desire to move the appointment of waste management sub-contractors to earlier in the construction process, at construction planning rather than at the start of construction. To facilitate this appointment earlier in the processes, and to drive the appointment of good practice Waste Management Contractors, pre-qualification of Waste Management Contractors could be helpful. This could be used as the first stage of appointment, to confirm the aspirations of the Construction Contractor to deliver good practice waste management and to eliminate unsuitable Waste Management Contractors from the procurement process. This pre-qualification approach could be used when establishing contracts for single projects or in setting up frameworks with Waste Management Contractors to cover multiple projects.

Construction Contractors and Waste Management Contractors agreed that the procurement and contract process should focus on good practice recovery within the waste management sector. For Construction Contractors, this good practice would include the provision of auditable recovery rates that could be produced on a monthly or quarterly basis. Source segregated waste recovery rates would also be useful information. This aspiration could be addressed by explicitly stating the need for recovery rates to be provided on a monthly or quarterly basis in the contract specification and embodied in the contract clauses, and by stating that audit records should be provided upon request.

Such pre-qualification, tender and contract information would be developed through the concurrent WRAP project WAS 800-003.

### 4.0 Review of Waste Management Contractor terms and conditions of business

The terms and conditions of business from 12 Waste Management Contractors were reviewed in order to identify existing clauses which make reference to good practice waste recovery, reporting practice and/or auditing recovery rates. The results of this review are shown in the summary overlap and gap analysis given in Table 1. Examples of the contract clauses referred to by the column headings are included in Appendix 1. None of the Waste Management Contractor’s standard terms and conditions of business makes reference to a commitment to good practice or to reporting and/or auditing recovery rates.

#### Table 1: Overlap and gap analysis of Waste Management Contractor terms and conditions of business

<table>
<thead>
<tr>
<th>Waste Management Contractor</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitions</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste exclusions</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accepted waste</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Containers on street</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste ownership</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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5.0 Standard Construction Contracts

In order to provide a recognisable and credible basis for the development of contract clauses for Waste Management Contractors to use within their standard terms and conditions of business for the construction sector, standard construction contracts were reviewed to identify any clauses relevant to waste management. This review specifically included:

- The JCT (The Joint Contracts Tribunal Limited) Constructing Excellence CE Contract for partnering, contracts for Minor Building Works (and associated sub-contracts), for Design and Build (and associated sub-contracts), for Intermediate Building (and associated sub-contracts), the Framework Agreements, the contract for Major Project Construction (and associated sub-contracts), and the contract for Homeowners, and the recent Guidance note on sustainability;
- The NEC3 (New Engineering Contract 3) contracts, specifically the Engineering and Construction Contract, the Engineering and Construction Subcontract, the Engineering and Construction Short Contract, the Engineering and Construction Short Subcontract, the Term Service Contract, and the Framework Contract;
- The ACA (Association of Consultant Architects Limited) Standard Form of Contract for Project Partnering (also known as the PPC2000), the Standard Form of Specialist Contract for Project Partnering (also known as the SPC2000), and the Standard Form of Contract for Term Partnering (also known as the TPC2000);
- The FIDIC (Federation Internationale des Ingenieurs-Conseils – The International Federation of Consulting Engineers) Conditions of Contract for Construction for Building and Engineering Works Designed by The Employer (Multilateral Development Bank – MDB Harmonised Edition), the Contract for Design Build and Operate, and the Short form of Contract; and

5.1 JCT Contracts

Scott Wilson’s experience suggests that JCT contracts are widely used within private sector construction but are infrequently used for publicly funded work.

The Constructing Excellence CE Contract makes no specific mention of waste management but the contract has been designed to promote integration of the supply chain, improve efficiency and reduce all wastage (including materials, time, and cost). Thus, this form of contract would include early engagement of Waste Management Contractors, and contract key performance indicators are likely to include wastage rates.

The contracts and sub-contracts for Minor Works, for Design and Build, and for Intermediate Building works do note that waste removal is included in the contract (or sub-contract) sum but there are no further clauses or guidance on the issue.

The Framework Agreement specifically references environmental performance improvement and reduction in waste, stating that the framework objectives include “improvements in environmental performance and sustainability and reductions in environmental impact”; and that Framework contractors will involve their supply chains to address this objective. The Framework Agreement also notes that such improvements might result from reductions in waste.

The contract and sub-contract for Major Project Construction and the contract for Homeowners make no mention of waste management or sustainability.

JCT has recently published a Guidance Note related to embodying sustainability in its existing contracts. It highlights the existing clauses in the JCT CE Contract and the Framework agreement. The Note also suggests that waste may be a performance indicator on projects, and references WRAP’s suite of contract clauses.
5.2 NEC3 Contracts
Based on Scott Wilson’s experience, NEC3 is the contract of choice for publicly funded construction projects.

The NEC3 contracts include options for using key performance indicators and incentive schedules but there is no obvious mention of waste management or sustainability in the contract. As with the JCT Constructing Excellence CE Contract, the NEC3 suite of documents have been designed to promote partnership working and drive out inefficiency (and waste). Thus, this form of contract could include early involvement of the Waste Management Contractor and setting waste management performance indicators.

5.3 ACA Contracts
The ACA Standard Form of Contract for Project Partnering, or PPC2000, is a well known and highly regarded form of contract but, in Scott Wilson’s experience, is less often used that the JCT and NEC3 contracts. As the PPC2000 is targeted at partnering arrangements, it is probably not used as frequently as contracts in the JCT ‘family’, but may be used as frequently as its JCT equivalent (the Constructing Excellence CE Contract). In Scott Wilson’s experience, partnering contracts are more often used for public sector works.

The PPC2000 is a partnering contract which, as with the JCT Constructing Excellence CE Contract, aims to integrate the supply chain and reduce wastage. Unlike the JCT equivalent or the NEC3 contract, it includes the specific objective of improved sustainability, for which it is expected that targets and key performance indicators will be set. The contract defines sustainability as “measures intended to achieve reduced carbon emissions, reduced use of energy and of natural and manmade resources, improved waste management, improved employment and training opportunities, and any other measures intended to protect or improve the condition of the environment or the wellbeing of people”. The relevant clauses containing references to waste and sustainability are not amended by the Scottish Supplement. Similar clauses are contained in the Standard Form of Specialist Contract for Project Partnering (SPC2000), and the Standard Form of Contract for Term Partnering (TPC2000).

5.4 FIDIC Contracts
FIDIC contracts are often used for international projects, and this is Scott Wilson’s experience of their use.

The MDB Harmonised Conditions of Contract do have a clause which requires the contractor to take all reasonable steps to protect the environment and to limit damage and nuisance from operations. However, the focus of this environmental protection clause appears to be emissions to air and water, rather than waste management. The Conditions themselves do not mention sustainability or waste management. The Conditions of Contract for Design, Build and Operate Projects contains an identical clause and also has no mention of sustainability or waste management. The Short Form of Contract does not mention environmental protection, sustainability or waste management.

5.5 ICE Contracts
In Scott Wilson’s experience, the ICE contracts are still used for civil engineering contracts, but less frequently than the JCT or NEC3 contracts.

The ICE Design and Construct Conditions of Contract do not mention sustainability or waste management, nor does the Conditions of Contract Term Version, the Measurement Version, or the Minor Works version. The Partnering Addendum does not mention these aspects, although it does provide an opportunity to set waste management objectives and key performance indicators/incentives. The Target Cost Version does not mention sustainability or waste management, but it is intended to encourage early contractor involvement, which could support good practice waste management, and does have clauses on value engineering, which might also support good practice waste management.

5.6 Summary of review of standard contracts
Disappointingly, few standard contracts or subcontracts drive towards good practice in sustainability, environmental protection, or waste management, although some do allow such matters to be addressed through performance indicators, targets and incentives. Exceptions are the clauses within the JCT Framework Agreement, the ACA Project Partnering Contract (PCP2000), and the FIDIC MDB Harmonised Conditions and the Design, Build and Operate Conditions. These clauses form a sound basis for the development of clauses for use by Waste Management Contractors (and Construction Contractors) and the relevant clauses are reproduced in Appendix 2.
6.0 Model Clauses for Waste Management Contractors

Following the information gathering and review processes described, three simple clauses for Waste Management Contractors to apply to their standard terms and conditions of business have been developed to demonstrate to all Construction Contractors that the Waste Management Contractor:

- is committed to good practice waste management practices and waste recovery;
- has transparent and auditable systems for recording waste recovery; and
- will report recovery rates on a routine basis to meet the needs of the Construction Contractor.

The commitment to good practice clause draws heavily upon the commitments to environmental protection and sustainability included in the standard conditions of contract for construction work discussed in Section 5 and contained in Appendix 2. This approach has been adopted so that Construction Contractors working to such advanced contracts will be able to clearly identify Waste Management Contractors that are able to provide services which meet the conditions of the construction contract.

A commitment to good practice

As a provider of good practice waste management operations, [Company Name] is committed to protecting the environment and to limiting the damage and nuisance to people and property resulting from pollution, noise and other results of its operations. [Company Name] is committed to assessing and improving upon environmental performance and sustainability and reducing environmental impact, including examining and implementing cost-effective options to:

- increase the recovery of materials from the incoming waste stream and reduce the residual waste sent for landfill disposal;
- work with customers to enable improved waste management;
- reduce carbon emissions and reduce energy consumption;
- reduce the use of natural and manmade resources and encourage the use of recovered materials.

A transparent and auditable measurement system

To reinforce its credentials as a provider of good practice waste management services, and to provide our customers with the confidence that reported recovery and recycling rates can be used with confidence, [Company Name] has a systematic process for recording data and calculating recovery and recycling rates. This process is subject to routine checks, the results of which, and any discrepancies and corrective actions, are recorded. The process for recording and reporting waste and recovery and recycling data, and the associated checking records and action reports are available for inspection by our clients upon request.

A flexible reporting system

To support our customers in meeting their contractual obligations [Company Name] is committed to providing routine reports of waste accepted, and facility recovery and recycling rates on a weekly, monthly and quarterly [delete as appropriate] basis. We welcome the opportunity to discuss reports with our customers, helping to improve waste management practices on site.
Appendix 1 – Typical clauses within Waste Management Contractors Terms and Conditions of Business

This Appendix sets out example clauses from standard terms and conditions of business as referenced in Table 1 of the main report.

| Definitions | For the purpose of the Contract except where expressly stated to the contrary, the following words shall have the following meanings:
|             | “the company” means COMPANY NAME.
|             | “the customer” means the person or company requesting provision of services by the company;
|             | “contract” means the form of agreement between the company and the customer;
|             | “services” means the provision the services described in the contract including the provision of skips for a period of hire and the removal of refuse on behalf of the customer and the subsequent disposal of the contents of skip or skips on behalf of the customer;
|             | “the skip” means any skip or skips or any other equipment provided as part of the service;
|             | “the site” means the place where the skip is to be deposited. |

| Waste exclusions | The customer shall ensure:
|                 | a) That no liquids explosives, toxic, or dangerous materials including, but not limited to fibrous or bonded asbestos, solvents, minerals or greases will be placed in the skip.
|                 | b) That no cans, bottles or other liquid containers are placed in the skip unless they are dry, free from liquid, residues and open for inspection.
|                 | c) That no fridges,freezers, vehicle tyres, car/commercial vehicle batteries are placed in the skip. |

| Accepted waste | The customer shall ensure:
|                | a) That the customer signs a single or multiple consignment Transfer Note declaring the waste type and that the waste is accurately described when completing the Transfer Note.
|                | b) Where the waste type does not conform to the description as specified on the Waste Transfer Note or is different to that as specified at the time the skip was ordered, then charges will vary accordingly.
|                | c) Where inert waste loads are ordered and they are found to contain other waste types, in particular mixed waste materials thus contaminating the load, the customer will be charged accordingly to a mixed waste load. |

| Containers on street | The customer shall ensure that all permissions required before the skip can lawfully be deposited on the site including the permission required under the Highways Act 1971 have been or will be obtained before they request the company to deposit the skip on the site and that the said permission will be kept in force during the period of hire and where necessary for up to 3 working days thereafter. The customer shall ensure that skip safety cones and lights remain with the skip to keep it adequately protected, especially during the hours of darkness. |

| Waste ownership | All materials of whatever type deposited in a skip become the full and exclusive property of the company at the time of removal of the skip. Furthermore, the company shall not be responsible for any property including personal effects deposited by the customer or any other person in the skip and shall not be bound to return the same nor be liable for any loss or damage thereto. |

| Container responsibility | The customer has full responsibility for the skip whilst it is on the customer’s property or under the customer’s control. Title and property of the skip remain with the company at all times. The customer is responsible for the safekeeping of the contents of the skip, cleaning up of all debris and damping down contents to prevent nuisance. |
from dust. The customer will ensure that there is a suitable and safe means of access so as to ensure that the collection of skips takes place without risks to the person or equipment and that the skip is placed on a flat, even surface. The customer must not move the skip from the position it is left in without agreement by the company. The company reserves the right to deposit or collect a skip from a place that it considers unsafe. The customer undertakes to fill the skip within the hire period and to inform the company in good time of its readiness for collection.

### Care of equipment
The customer is responsible for any loss or damage to the skip whilst in the customer’s care, custody or control or upon delivery to the site. The customer shall return the skip to the company in good conditions, fair wear and tear accepted. The liability of the company is restricted to loss or damage caused by negligence in connection with the delivery or collection of the skip only. The company shall in no circumstances have liability for any loss of profit or consequential loss. The foregoing does not limit the liability of the company for personal injury or death caused by its negligence. Under no circumstances shall fires be lit in skips.

### Indemnity for liability
The customer shall keep the company indemnified against any claim demand or penalty arising during the period of hire and which could not have been made had the company not agreed to provide the service including, but not limited to all 3rd party claims, or claims for damages arising out of accidents related to any skip or skips the subject of this contract.

### Delivery/collection
Delivery or collection times are estimates only and the company shall have no liability for any delay. The time of delivery or collection shall not be of the essence of the Contract unless previously agreed in writing by the company. The skip may be collected in advance of or after the stated collection times upon giving reasonable notice to the customer. When one of the company’s lorries calls to deliver a skip or to collect a skip load of waste, ten minutes will be allowed for unloading or loading after which a charge will be incurred at the day-work rate of the vehicle kept waiting. The company can accept no responsibility for failure to supply or for delay in supplying skips which may be due directly or indirectly to and cause or circumstances beyond the control of the company or to any unforeseen or abnormal condition.

### Special/difficult waste
Due to problems with some types of waste, the company reserves the right to charge an excess weight amount. This will be verified by a weighbridge ticket as necessary and further details can be provided as required. In some areas items such as roofing materials, double glazed units, mattresses, tree stumps, and electrical items can be difficult to dispose of and may incur a surcharge.

### Overloading
The customer must ensure that the skip is not filled above the level of the sides. In the event of a skip being overloaded, the direct costs of labour and additional skip hire will be charged to the customer.

### Payment terms
The company reserves the right to charge the customer for any additional costs brought about from the hire of the skip without prior consent from the customer. The customer will not be entitled to dispute any payment made. The customer agrees that the company records will be proof of the service provided. All payments for the service will be due and payable upon delivery of skip unless otherwise agreed. For credit account customers, payments will be made 30 days after the receipt of the invoice. Any payments made after 30 days will be subject to a 15% plus VAT surcharge.

### Removal notice
If the company becomes aware that customers are not compliant with these terms and conditions of business, the company reserve the right to remove the skip immediately without notice.
Appendix 2 – Relevant clauses from standard construction contracts

From the JCT Framework Agreement

Clause 5  The Framework Objectives
5.1 The Framework Objectives are as follows:
  5.1.1 zero health and safety incidents;
  5.1.2 teamworking and consideration for others;
  5.1.3 greater predictability of out-turn cost and programme;
  5.1.4 improvements in quality, productivity and value for money;
  5.1.5 improvements in environmental performance and sustainability and reductions in environmental impact;
  5.1.6 right first time with zero defects;
  5.1.7 the avoidance of disputes;
  5.1.8 Employer satisfaction with product and service; and
  5.1.9 enhancement of the Provider's reputation and commercial opportunities.

Clause 10  The Provider’s Supply Chain
10.1 The Provider will endeavour to see to it that all members of his Supply Chain are made aware of, understand and are prepared to embrace and adhere to the principles of collaborative working envisaged in this Framework Agreement. Where practicable and appropriate the Provider will engage members of his Supply Chain on terms which incorporate or reflect such principles.
10.2 The Provider will, where practicable and appropriate, endeavour to consult with and/or involve members of the Provider's Supply Chain in relation to the following essential aspects of the Tasks:
  10.2.1 design development;
  10.2.2 project planning;
  10.2.3 risk assessment and risk allocation;
  10.2.4 health and safety assessments and planning;
  10.2.5 assessing and improving upon environmental performance and sustainability and reducing environmental impact;
  10.2.6 value engineering;
  10.2.7 change control;
  10.2.8 quality control;
  10.2.9 early warning; and
  10.2.10 problem solving.

Clause 16  Sustainable development and environmental considerations
The Provider will assist the Employer and the other Project Participants in exploring ways in which the environmental performance and sustainability of the Tasks might be improved and environmental impact reduced. For instance, the selection of products and materials and/or the adoption of construction/engineering techniques and processes which result in or involve:
  16.1 reductions in waste;
  16.2 reductions in energy consumption;
  16.3 reductions in mains water consumption;
  16.4 reductions in CO₂ emissions;
  16.5 reductions in materials from non-renewable sources;
  16.6 reductions in commercial vehicle movements;
  16.7 maintenance or optimisation of biodiversity;
  16.8 maintenance or optimisation of ecologically valuable habitat; and
  16.9 improvements in whole life performance.
From the ACA Project Partnering Contract (PPC2000)

4. Objectives and targets
4.1 The Partnering Team members shall establish, develop and implement their partnering relationships, within their agreed roles, expertise and responsibilities and in accordance with the Partnering Documents, with the objectives of achieving for the benefit of the Project and for the mutual benefit of Partnering Team members:-
   (i) trust, fairness, mutual co-operation, dedication to agreed common goals and an understanding of each other's expectations and values;
   (ii) finalisation of the required designs, timetables, prices and supply chain for the Project;
   (iii) innovation, improved efficiency, cost-effectiveness, lean production and improved Sustainability;
   (iv) completion of the Project within the agreed time and price and to the agreed quality;
   (v) measurable continuous improvement by reference to the Targets described in clause 4.2 and the KPIs;
   (vi) commitment to people including staff and Users;
   (vii) any additional objectives stated in the Project Partnering Agreement.

4.2 Each Partnering Team member undertakes to the others to do all that it can, within its agreed role, expertise and responsibilities and in accordance with the Partnering Documents, to pursue for the benefit of the Project and for the mutual benefit of Partnering Team members the Targets stated in the KPIs for:-
   (i) reduced capital cost and whole life costs;
   (ii) reduced design, supply and construction time;
   (iii) reduced defects and zero defects;
   (iv) reduced accidents;
   (v) increased predictability;
   (vi) increased productivity;
   (vii) increased turnover and Profit;
   (viii) improved quality;
   (ix) improved Sustainability;
   (x) any other Targets identified in the KPIs.

16. Quality and environment
16.1 The Partnering Team members shall work together and individually, in accordance with the Partnering Documents, to achieve the quality of the Project described in the Partnering Documents and to seek in accordance with the KPIs to reduce defects in the Project, to increase its expected lifespan, to improve its Sustainability and to reduce the cost of its Operation.

Appendix 1 Definitions
Sustainability - measures intended to achieve reduced carbon emissions, reduced use of energy and of natural and manmade resources, improved waste management, improved employment and training opportunities, and any other measures intended to protect or improve the condition of the environment or the wellbeing of people.

From the FI DI C MDB Harmonised Conditions

4.18 Protection of the environment
The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations. The Contractor shall ensure that emissions, surface discharges and effluent from the Contractor's activities shall not exceed the values stated in the Specification or prescribed by applicable Laws.