Materials and Waste

This procedure provides the framework for project teams to undertake construction waste elimination planning and excavation and demolition material re-use. The procedure will support the reduction of waste and re-use of surplus material as a product in line with our Now or Never commitments. Materials and waste planning will be completed in the Project Environment Plan, supported by mi|risk and mi|SED.

Our 2030 ambition is to generate Zero Avoidable Waste.

Reducing the amount of waste generated on site and preventing excavation and demolition arisings from becoming waste will save money through reduced material consumption and fewer skip movements.

This procedure is mandatory any non-compliance must be signed off by your Director of Delivery or Sustainable Development Director. The processes described in this procedure are incorporated into the Material and Waste theme of mi|risk. Compliance with mi|risk will therefore provide compliance with this procedure.

Key definitions can be found in Appendix 1. A list of supporting documents can be found in Appendix 2.

Construction waste elimination

Our ambition in Now or Never is to eliminate all avoidable waste during the construction of our projects and for any non-hazardous unavoidable waste to be diverted from landfill. The flow chart on the following page shows the process to be followed for construction waste elimination from preconstruction, through to delivery and then handover. Supporting notes are provided to give additional detail and a list of supporting documents is in Appendix 2.

Excavation material re-use

Our ambition in Now or Never is to reuse 100% of non hazardous excavation arisings from our sites as a material where technically and practicably possible (either onsite or offsite). This is covered by waste regulations and the CL:AIRE Definition of Waste: Code of Practice (DoWCoP), which is managed by CL:AIRE, an independent, not-for-profit organisation that acts for the development industry and regulators.

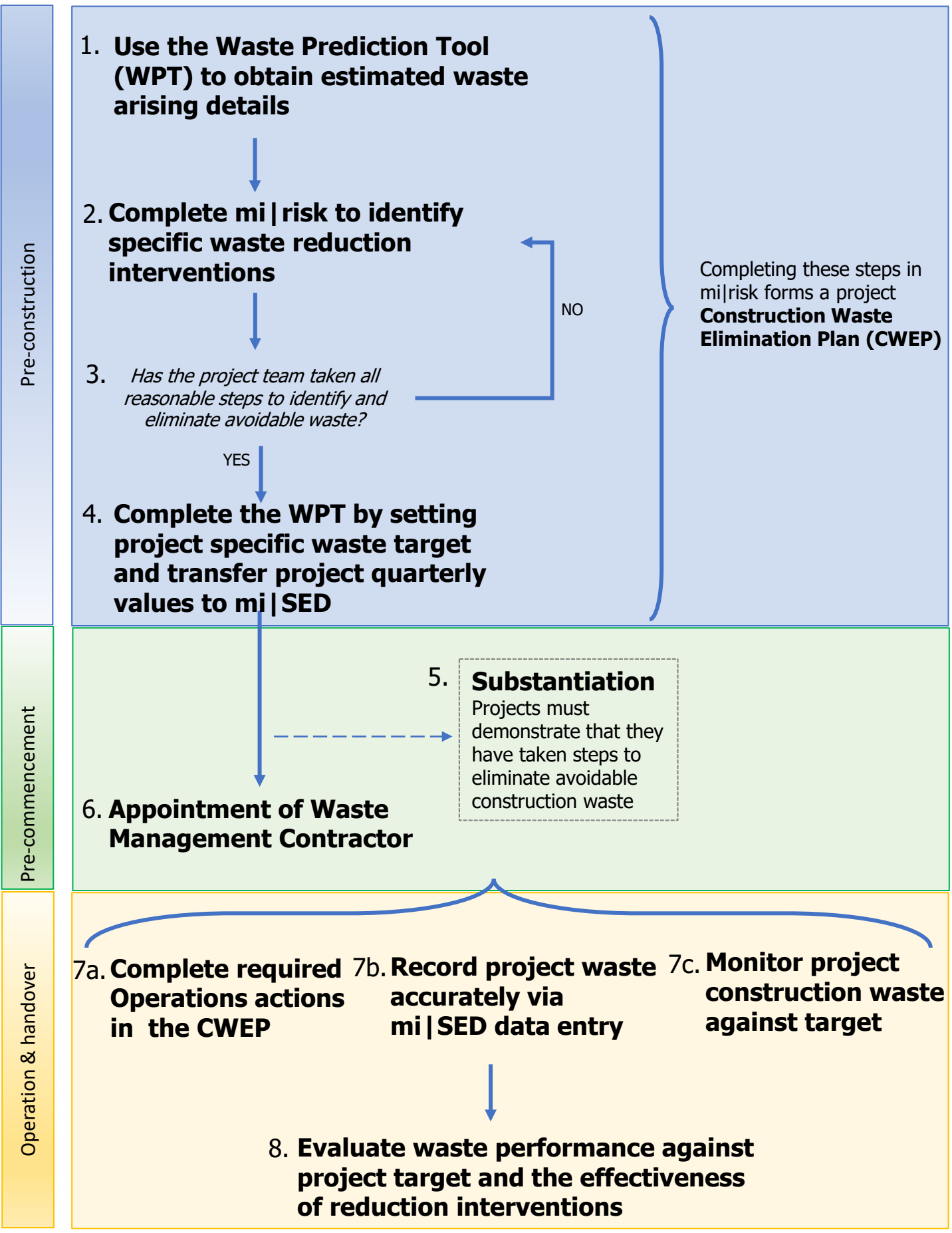
The DoWCoP provides a clear, consistent and efficient process which enables the reuse of excavated materials on-site or their movement between sites. Use of the DoWCoP supports the sustainable and cost effective development of land. DoWCoP can provide an alternative to Environmental Permits or Waste Exemptions, enabling: direct transfer, reuse of clean and naturally occurring materials between sites conditions to support establishment/operation of fixed soil treatment facilities reuse of both contaminated/uncontaminated materials on their site of origin and between sites within defined cluster projects.

Demolition material re-use

Our ambition in Now or Never is for 100% of our non-hazardous demolition waste to be recovered at the highest possible level of the waste hierarchy. Maximising the recovery of materials and resources from demolition has economic and sustainability benefits. Minimising demolition arisings through recycling and identifying reuse opportunities reduces disposal costs, material procurement and has the potential to create an income.

There are various routes to reusing demolition material as aggregate, these include: Quality Protocol: Aggregates from Inert Waste, U1 Exemption, Environment Permit, CL:AIRE DoWCoP.

Construction Waste Elimination Process



Construction Waste Elimination Process – Further information

Pre-construction

1. Use the Waste Prediction Tool (WPT) to obtain estimated waste arising details

Using the WPT – RMS-FM-030 Waste Prediction Tool, obtain an estimated total waste figure and additional details including the total volume, material composition, timeline and the estimated skip requirements: number & cost.

Other resources that can indicate how much waste a project is expected to generate include ECCO Lab and BIM.

The WPT uses historical waste data from previous WD projects to predict future projects waste details. If a project is markedly different from any previous project in form or intended method of construction then the outputs may be inaccurate. The project team should scrutinise the outputs to determine their relevance when Construction Waste Elimination Planning.

2. Identify specific waste elimination interventions supported by resources provided in specific mi|risk

The project team should collaborate with all appropriate stakeholders to develop an action plan to eliminate construction waste.

The content in the Materials and Waste Section of mi|risk will guide project teams through identification and development of actions to eliminate waste. Construction waste elimination can be achieved throughout the project, by various disciplines and stakeholders. The information provided in mi|risk includes:

- Design – collaboration with design consultants at early RIBA stages
- Works Partners – methods and practices
- Goods Partners – take back schemes, pre-cutting etc
- Protection Strategy – sequencing, closed-loop recyclable protection materials

See RMS-RE-145 Construction Waste Elimination Ideas Library for more information

To complete mi|risk the steps taken to eliminate waste from the project in pre-construction or required actions in delivery should be summarised. Upload supporting evidence (e.g. design out waste workshop outputs, take-back schemes, supply chain partner agreements)

Once the actions are completed and recorded in mi|risk, this forms the Construction Waste Elimination Plan

Construction Waste Elimination Process – Further information

Pre-construction

3. ***Has the project team taken all reasonable steps to identify and eliminate avoidable waste?***

All non-hazardous materials are considered avoidable waste as they may be prevented, reused or recycled. Project teams must consider all predicted waste materials and apply the highest level possible of the waste hierarchy.

4. Complete the WPT, setting a specific project waste target and transfer project quarterly values to mi|SED

Considering the Construction Waste Elimination interventions implemented and identified, determine an appropriate project specific construction waste target. Revisit the WPT and enter agreed target. Transfer the project quarter waste targets to mi|SED.

mi|SED project waste target input will allow future project waste to be compared against Now or Never strategy targets.

Completion of steps 1-4 form a project Construction Waste Elimination Plan

Pre-commencement

5. Substantiation

Projects must demonstrate that they have taken steps to eliminate avoidable construction waste.

6. Appointment of Waste Management Contractor

Follow the standard supply chain partner approval process, to ensure that the Waste Management Contractor is suitably licensed and permitted to conduct the necessary waste movements for the project.

All waste service providers are required to complete this pre-qualification questionnaire (PQQ) - RMS-FM-034 Waste Management Supplier Appraisal - PQQ

Operation & handover

7a. Complete required Operations actions in the CWEP

The actions required to deliver the CWEP will be stored in mi|risk. Ensure agreed interventions are delivered and any required operational actions are taken. Further waste reduction support is included in the delivery mi|risk assessment and actions:

- Planning to avoid end of project waste (e.g. surplus materials, office equipment) – transfer to another WD project, use of material re-use networks
- Temporary/miscellaneous items – replacement of disposable items with reusable alternatives, PPE recycling

See RMS-RE-145 Construction Waste Elimination Ideas Library for more information

For best practice site housekeeping refer to Specific Guidance in mi|risk

Construction Waste Elimination Process – Further information

Operation & handover

7b. Record project waste accurately via mi|SED data entry

Accurate recording of waste data is critical to monitoring and measuring performance – see RMS-RE-039 Waste Reporting Guide. It is also a compliance requirement under Waste Duty of Care legislation. Waste Data Collection is monitored through Environmental Site Inspection – see RMS-RM-091 Environmental Site Inspection Audit Reporting Guidance. Further waste compliance information can be found in the Specific Guidance in mi|risk.

RMS-FM-031 Site Waste Data Record must be used to record the material composition of mixed waste skips – this should be determine by visual inspection – to give evidence for data entry assurance and external audits.

mi|SED will apply a standardised void space % for all skip loads – see RMS-RE-010 Waste Stream Skip Standard Void.

Deviation from standard void rates is permitted under two scenarios:

- If mechanical compaction is occurring on site
- If visual inspections and assessments of actual void rates are being carried out on site and documented using RMS-FM-031 Site Waste Data Record and retained as evidence for audit

Any materials leaving site for via direct transfer or take back schemes should be recorded using RMS-FM-035 Product Transfer Note

Any waste leaving site must have an accompanying Waste Transfer Notes for inert and non-hazardous wastes, or Hazardous Waste Consignment Notes for hazardous waste, including full, accurate descriptions of the waste. See RMS-RE-009 WD Waste Transfer Note Checklist Card to ensure waste documents are fully and accurately completed.

7c. Monitor project construction waste against target

The progress of the project against the identified target will be monitored through mi|SED and Power BI dashboards.

Construction waste elimination opportunities should be continually reviewed throughout the project duration.

8. Evaluate waste performance against project target and the effectiveness of reduction interventions

Share any innovative or best practice approaches with wider Willmott Dixon and inform Group Sustainability

Excavation Material Re-Use

- More guidance to be released shortly

RMS-PR-066 Reusing Excavated Materials
RMS-PR-025 Breaking Ground

Demolition Material Re-Use

- More guidance to be released shortly

RMS-PR-065 Reusing Demolition Materials
RMS-PR-026 Demolition and Dismantling

Procurement of Waste Services and Approved Waste Partners

All disciplines will play their part in selecting supplier and subcontractor partners, who are waste carriers, can prove their waste Duty of Care and demonstrate lean engineering and efficient working practices. Refer to the Builders Profile procedures.

Waste prediction will help identify waste partners needed for the removal of waste streams from site by approved partners, listed in the Waste Portal. PQQ via Builders Profile with initial checks of DoC, WCL and Public Register, followed up by LCO EM audits (see below). Carriers and their destination sites will be checked, with audits of waste service and excavation/demolition partners prior to appointment through PQQ and Builders Profile SHE team validation. Waste contracting partners holding PAS402 standard will be given preference to support delivery of our waste objectives and assist delivery of BREEAM 2018 requirements: this is requested at PQQ Stage 1 and PQQ Stage 2 Waste Management Supplier Part 2 Audit. LCO's will be allocated responsibility for audit by their Environmental Manager(s) based on proportional spend with each partner. Each allocated EM will complete triennial audit of their allocated waste partners and Duty of Care records will uploaded by each Environmental Manager to the Waste Portal:

- PQQ and Waste Audit (audit templates for Groundworks, Demolition, Waste service partners RMS-PR-032/033/034)
- Supporting evidence from audit
- Waste carriers licence
- Permit(s)/exemption(s) for transfer station or destination site.

When appointed, projects may choose to employ the approved works partner and, at this time, project DoC checks will be completed, as well as checks of the Public Register, to ensure that no regulatory intervention has occurred. EM's will maintain Waste Portal as allocated and advise project teams if any issues arise, as well as monitor for regulatory intervention or court case.

Performance of waste partners, including excavation and demolition works partners, will be evaluated monthly and with an annual review, led by the Supply Chain Manager and supported by H&S and Environmental competent persons. Performance assessment will include rating of waste reuse/recycling to targets agreed for each project and within Appendix C6 commitments.

Willmott Dixon must ensure waste Duty of Care compliance as the waste producer, and as an Upper Tier waste carrier, is defacto a broker of waste services from its sites. It is policy for Willmott Dixon projects to partner directly with waste service providers, rather than to do so via Waste Brokers, and after approval of waste provider by the Environment Manager, following procedures detailed on the Waste Portal.

Waste Management On-Site

Practice for material efficiency and waste control is provided in the Material and Waste Management RMS-PR-068 procedure. All waste will be securely stored to prevent risk of windblown or weather damage, to prevent nuisance, risk of on-or-off site littering and avoid pollution risk in surface and storm water runoff.

Waste will be clearly segregated wherever practicable, to enable waste contract partners the best opportunity to recycle waste, managing uncontaminated materials. Where space for segregation is not practicable on sites, with short duration or tight footprint, selection of partners able to recover materials from mixed wastes, at recycling rates of 98+% will be expected for volumes.

Wet Waste Management On-Site

Wet wastes will be prohibited from all mixed and segregated skips to avoid cross-contamination and prevent waste partners from being able to effectively recover waste and avoid waste to landfill. Plaster, mortar and paints, as well as COSHH residue, will all be controlled separately with wash-stations or watertight hazardous waste containers.

Duty of Care Compliance

Any materials that will be discarded will be waste and the Waste Duty of Care assurance must be gained prior to any waste leaving site. In all cases, the DoC Schedule must be completed in the PEP, with assurance and supporting evidence gained on each destination site, before movement from Willmott Dixon’s site.

All waste, whether construction, excavation or demolition waste, will be checked that it is going to an approved destination site and that waste transfer note (WTN) checks RMS-PR-069 are completed, prior to leaving site. The project director/manager will ensure that the Build Manager is appointed (or a delegated and competent person), who will be trained to complete checks with the waste driver and may be the Build Manager or Gateman, or in the case of excavation and demolition works, the site supervisor. The appointed or delegated person will complete the Waste Data Slip RMS-FM-031 for mixed waste, as well as segregated waste streams if necessary.

The requirements of subcontractor partners to provide details and compliant transfer notes is detailed within the Appendix C6 Subcontractor Environmental Conditions.

The procedures for Duty of Care and Permit checks RMS-PR-069 for waste carriage and destination sites, as well as the requirement for waste transfer note (WTN) and hazardous waste consignment note (HWCN) checks RMS-PR-070. Compliant completion of waste notes is supported by the Willmott Dixon Waste Checklist Card RMS-RE-009 that has been provided for site teams and supply chain partners.

Where there are large volumes of excavated waste movement, a daily “season ticket” may be provided, supported by evidence needed with waste transfer notes signed, that would be checked daily.

Waste (including hazardous, COSHH and packaging) will be assessed and classified in the WM3 Technical Guidance. The “What is Waste?” guide updated in July 2016 will support in References.

Performance Reporting and Management

Performance reporting requirements for waste (and all environmental indicators) is included in the Reference section, with guidance on the naming convention for storing waste data. See detail in the Project Environmental Planning procedures RMS-PR-050, with project SHE close out and archiving procedures RMS-RM-071 for WTN’s, HWCN’s and diversion rates to be followed.

Appendix 1 – Key Definitions

Definitions:

Zero Avoidable Waste (ZAW) in construction - *preventing waste being generated at every stage of a project's lifecycle, from the manufacture of materials and products, the design, specification, procurement and assembly of buildings and infrastructure through to deconstruction. At the end of life, products, components and materials should be recovered at the highest possible level of the waste hierarchy, i.e. reused before being recycled, whilst ensuring minimal environmental impact.*

Materials - *products and surplus materials, including offcuts, that may be used as originally intended, if stored carefully with clear housekeeping discipline and in a form that would allow them to be used, without change.*

Waste - *"any substance or object that the holder discards, intends to discard, or is required to discard", often as a result of poor storage, over order or misuse, rendering them waste.*

Appendix 2 – Supporting Documents

Construction Waste

- RMS-FM-030 Waste Prediction Tool
- Goods Supply Chain Partners Waste Take Back Schemes
- RMS-RE-039 Waste Reporting Guide
- RMS-RM-091 Environmental Site Inspection Audit Reporting Guidance
- RMS-FM-031 Site Waste Data Record
- RMS-RE-010 Waste Stream Skip Standard Void
- RMS-FM-035 Product Transfer Note
- RMS-RE-009 WD Waste Transfer Note Checklist Card
- RMS-RE-145 Construction Waste Reduction Library
- RMS-FM-084 Supply Chain Works Partner - Predicted Waste Form