



ROADWAYS THE RIGHT WAY

RECYCLED TYPE 4 SUBBASE

FACTORY PRODUCTION CONTROL DOCUMENT

Process 09v2.2		Page 1
Owner	Issued	Reviewed
A.Smith	11/02/2021	16/09/2021

Factory Production Control

An adequate system for Factory Production Control (FPC) is a legal requirement of the European construction products directive. It must be set up in accordance with:

Annex C of BS EN 1342:2002+A1:2007

Sections 1-8 below outline Hailsham Roadway's system for factory production control, to ensure product characteristics are maintained and non-conforming products are dealt with adequately.

1. Responsibility & Management

1.1 Site Manager

The Site Manager has Overall responsibility for recycling operations, which include:

- Liaison with Depot Supervisor in relation to material quality output/input
- Health and Safety matters
- Ensuring all plant is adequately serviced and maintained
- Implementation and review of the FPC
- Ensuring all documentation is complete including the reporting of non-conforming products.
- Ensuring Products are tested and meet relevant European specification
- Carrying out weekly site inspections

1.2 Operations Manager

- Overall responsibility of site - Hailsham Roadway Construction
- Liaising with the site manager regarding all major issues
- Review and auditing of FPC

1.3 Compliance Administrator

- Control/Input of all waste/material movements.
- Monitoring of waste streams

1.4 Depot Supervisor

- Removal of class x (non-conforming materials) during the production process
- Inspection of all stockpiles and processing equipment
- Liaising with Site Manager if any discrepancies are found
- Informing Site Manager of any maintenance needs of all plant used
- Stockpiling raw/recycled material into segregated areas
- Operation of all recycling operational plant
- Ensuring Waste Transfer notes are completed for all material/waste movements in and out the site
- Maintaining the quarantined bay

2. Management Representative and review

The Site Manger is the appointed person to ensure the FPC is maintained. The FPC will be audited and reviewed annually by the Site Manager and Operations Manager. The FPC will be held in the main office at Woodside Depot.

3. Incoming waste materials

All waste received at Woodside Depot will be recorded. All waste transfer notes will be recorded on a spreadsheet and kept for a minimum of two years. The spreadsheet allows Hailsham to monitor waste streams and produce quarterly reports to the EA and other authorities upon request.

Hailsham will only accept waste from approved/checked suppliers.

The public will be permitted with the relevant proof of address.

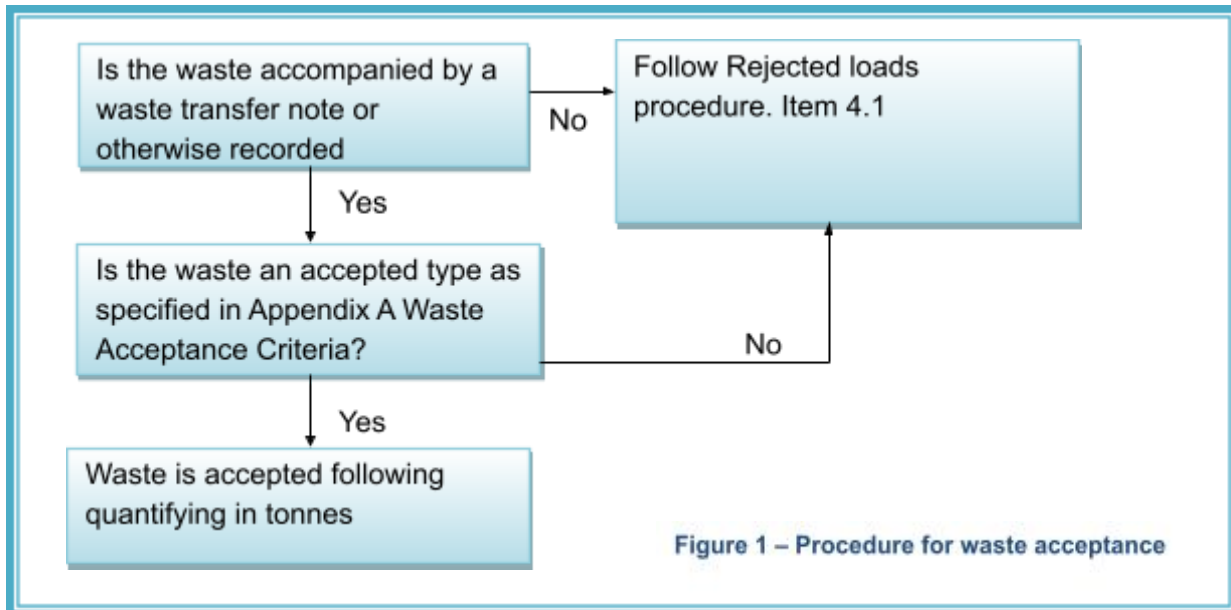
The following information is obtained as a minimum.

- Waste Licence or registration of exemption
- Waste carriers/broker registration details
- Material Details (WTN)
- Job Code (location of arising)
- Demolition or building contractors details/supplier details
- Date of demolition/arising/production

Location of arising, demolition or building contractors details/supplier details, Date of demolition/arising/production, will only be required before the first load is accepted. The person responsible for maintaining and recording the information is the compliance administrator (CA), who will ensure all the WTN are completed adequately and that they are maintained for the statutory time. WTN will be posted, or handed in at reception, which will then be collected in bulk weekly by the CA.

4. Receipt of waste materials

The following procedure (figure 1) is applied with relation to the acceptance of waste.



The Depot Supervisor and/or the drivers are responsible for inspecting the load on arrival. The Depot Supervisor is trained to Hailsham Roadway procedures to accept or reject incoming waste. If the material is coming from a Hailsham Roadway site it shall be tested for tar on site, if from an external source then it shall be tested before acceptance. The Depot Supervisor will ensure all WTN are collected and stored at Woodside Depot.

4.1 Rejected Load Procedure

A load will be rejected if it is brought to the Woodside Depot without the correct documentation and will not be permitted to tip and removed off site by the carrier.

Any loads that do not conform to the accepted material criteria at the site will not be permitted to proceed beyond the reception/inspection area.

Rejected material will be recorded on form (Appendix E) and discussions with the producer of the material will be instigated to lower the risk of receiving non compliant materials.

The material will be reloaded, if safe to do so, and reloaded onto the tipping vehicle or placed in a quarantine area if the vehicle has left Woodside. The producer of the material will be contacted and requested to remove the waste to an appropriate facility.

The CA will be contacted and provided with the following about the non-compliant material.

- Type of Waste
- Carriers Registration Number
- Name of Carrier
- Date of Delivery
- Name of Producer.

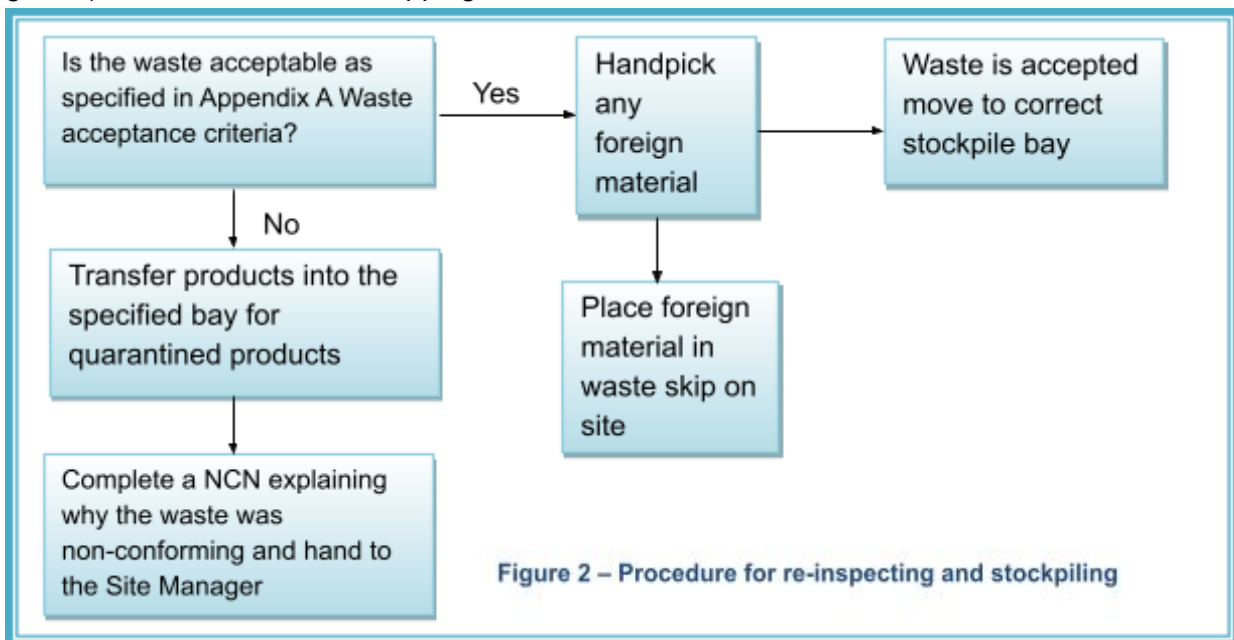
5. Quantifying and categorising

The Depot Supervisor and/or vehicle drivers will assess the load by estimating the value in tonnes. Each load will be given a EWC code. EWC codes are located on the MTN books. Once the load has been categorised it will be tipped in the correct stockpile. All stockpiles are signed for intended material. See below for feedstock categories:

- Bituminous Bound Waste

6. Re-Inspecting and stockpiling

All feedstock materials are separated, to avoid cross contamination. Each feedstock has an assigned area. All stockpiles are signed so any individual on site can identify the material/waste type. During tipping, the load will be inspected by Depot Supervisor and/or vehicle drivers. The following procedure (figure 2) will be followed when tipping.



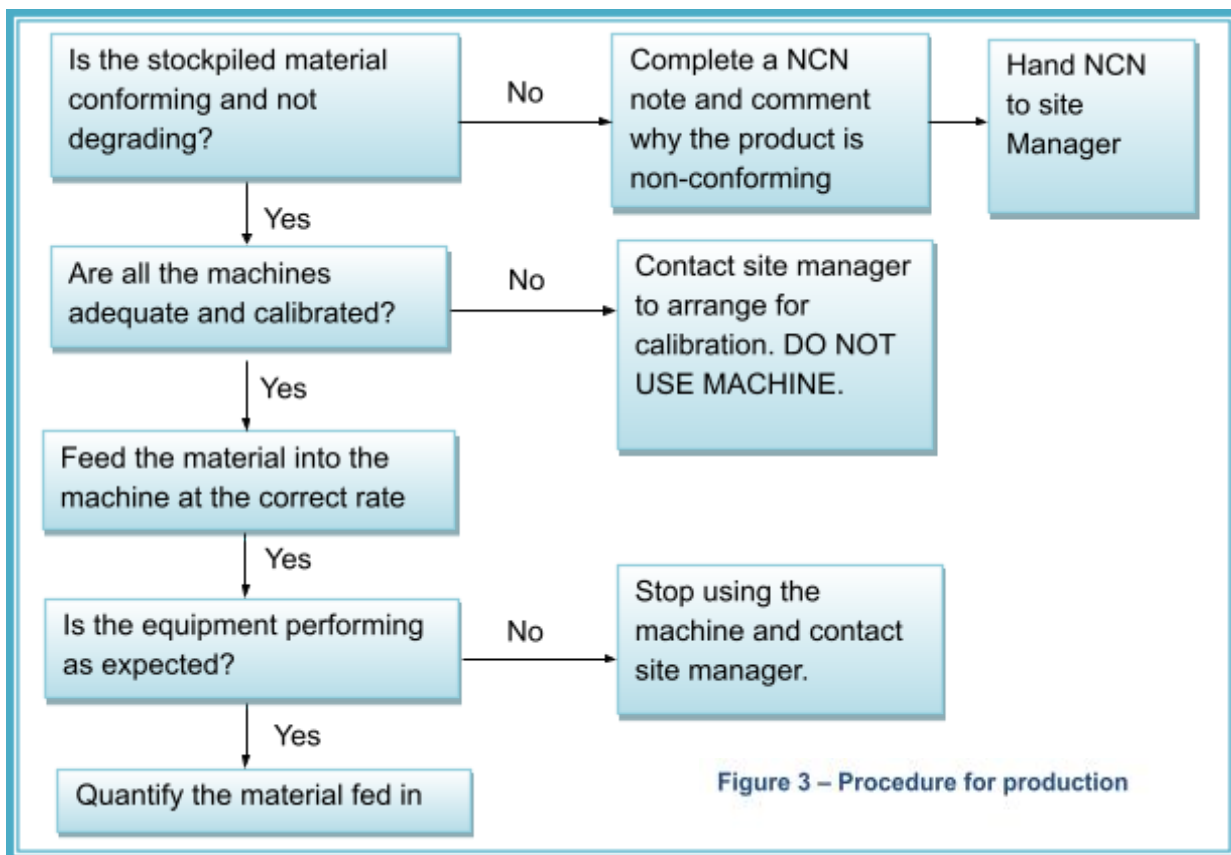
All non conforming products will be recorded on an NCN and stored at Woodside Depot. These will be collected weekly by the Compliance Administrator, who will discuss with the supplier why the load was rejected and the actions required to avoid any further rejection on future loads. The NCN notes will be recorded on Waste Accountant and be held for a minimum of 2 years.

7. Production

Before production the depot supervisor will check:

- The stockpiled material is not degrading before it is fed into the process.
- The material is still acceptable
- The material is fed in at the right rate
- The material fed in is quantified
- The correct machine is being used
- The machine is calibrated
- The equipment is performing as expected.

Any non-conformant materials will be transferred to a quarantined bay, where it will be treated and sent back to the stockpile or failing quality, back to the supplier or registered waste disposal site.



The depot Supervisor is trained to inspect the criteria above. The procedure below will be followed.

Table 2 below summarises the daily control process. Daily process control sheets will be completed each day by the depot supervisor and stored for a minimum of 2 years on site. A template of the daily process sheet can be found in Appendix D of this manual.

Table 2 - Daily Process Controls

Characteristic	Testing Procedure	Location of sampling /testing	Frequency	Remedial actions on non-conforming properties/materials
Deterioration	Visual Inspection	Stockpiled Material	Daily and during use	If deterioration will improve with time (i.e. moisture content too high) leave. Although if deterioration cannot be improved inform the site manager and move to non conforming bays.
Oversize/Undersize material	Visual inspection	Stockpiled Material	Before use	Remove oversize material with riddle bucket before use or change screen size.
Acceptability	Apply acceptance criteria and inspect visually	Stockpiled Material	During use and arrival of waste	Reject non-acceptable materials
Class x materials (wood/plastic/metal etc) no more than 1% in mass	Visual inspection	Stockpiled Material	Before/exit of screening plant	Remove class x materials by hand picking before/after use and move to appropriate waste skip.
Moisture content	Visual inspection	Stockpiled Material	Daily and before use	Leave to dry if moisture content seems too high. Or spray if moisture content is too low. The Site supervisor will test regularly for moisture contents
Feed Rate	Visual Inspection	Feeding station	Every 5 tonnes or if output is unusual	Inspect feeding station and speed up/slow feed rate. The angle of the initial screen can be changed if required.
Maximum and minimum size	BS EN 933-1	Exit of screening/crushing plant	Every 50 batches or if plant is acting unusual	Check the size of screens and check for any damage or malfunction to screener/crusher. Reprocess material or assign to a different product category.

8. Finished Products

For testing procedures please refer to Appendix C Testing. Any non-conforming products will be assessed by Depot Supervisor. If the non-conforming products can be easily improved, it will be carried out by the Depot Supervisor and will then be subject to further testing. If the non-conforming product cannot be improved it will be placed in the quarantined bay as specified in section 1.6 re-inspecting and stockpiling. All product stockpiles will be segregated to prevent cross contamination and deterioration.

The Depot Supervisor/Site Manager will be responsible for categorising the products and ensuring they meet the BS EN 13242 specification. Daily process control records will be completed by the Depot Supervisor and stored for a minimum of two years. All non-conformities will be recorded on NCN and held for a minimum of two years on site.

All material sold as WRAP protocol approved Type 4 is marked on delivery tickets.

All delivery tickets are kept for a minimum of 2 years.

Appendix A - Method Statement of Production

A.1 Waste Acceptance Criteria

The wastes that will be permitted at Woodside Depot are presented in the Appendix B

A.2 Waste Recovery Process & Equipment

The steps below outline Hailsham Roadway's production process of aggregates from waste.

- 1. All suitable and accepted waste materials will be stockpiled into allocated areas based on their EWC code. If crushing is required, waste will be allocated to temporary storage prior to crushing.*
- 2. Any foreign or non-conforming products will be moved to the quarantined bay.*
- 3. Where necessary foreign material (class x) will be handpicked from the stockpile and put into appropriate skips.*
- 4. Where crushing is required the waste will be fed into a suitable crusher via a loader then re-stockpiled.*
- 5. All class x materials removed will be put into designated skips based on the material type. Waste from all skips will either be recycled or disposed of by a fully licensed operator.*

A.3 Range Of Products Produced

Aggregates for unbound materials for use in Civil Engineering work and road construction BS EN 13242:2002+A1:2007

Table 3 – HRC Products

Product	SHW Reference
Type 4 Sub-base	Series 800 clause 807, table 8/5

Appendix B - Waste Types

EWC Code	Waste Description
17 03 02	Bituminous mixtures other than those mentioned in 17 03 01*

Appendix C - Testing

C.1 General

The Depot supervisor will visually inspect the products compliance during the process. If any irregularities, such as oversize materials or excessive fines are found, it will be reported to the site manager immediately and appropriate action will follow, which may involve re-screening, crushing or hand picking. This will be recorded by the depot supervisor on daily process control sheets.

All laboratories used will be UKAS accredited. Table 4 below details the schedule for testing Type 4.

Type 4 unbound sub-base

Roadways testing requirement for Type 4 unbound sub-base

Test	Roadways Type 4 testing policy
PSD (Grading & moisture content) EN 933-1	1 per week of production working days
Constituents EN 933-11	1 per week of production working days
Plastic/Liquid limit, BS 1377:Part 2:1990	1 per month of production working days
Los Angeles (resistance to fragmentation) EN1097-2	1 per month of production working days
Magnesium sulphate soundness EN1367-2	1 per month of production working days
OMC MDD, BS 1377:Part 4:1990:Clause 3	1 per month of production working days
Water absorption-Particle Density (WA PD), EN1097-6	1 per month of production working days
Frost Heave, BS 812:Part 124:2009 & SHW Clause 801	1 per month of production working days
Sulphate suite: W/S sulphate, EN1744-1 cl 10 Total Sulphur, EN1744-1 cl 11 Sulphide, EN1744-1 cl 13	1 per month of production working days
PH	1 per month of production working days
Asbestos Screen	1 per month of production working days

Table 12 - Grading requirement for Type 4 unbound sub-base

Sieve Size (mm)	Percentage by mass Passing		
	Typical Grading	Specification	
		Min	Max
63	100	100	100
31.5	90	75	99
16	50	43	81
8	50	23	66
4	20	12	53

2	10	6	42
1	5	3	32
0.063	2	0	9

Appendix D - Daily Process Control Record



DC01 - Daily Process Control record

Operator Name

Date

Guidance on control can be found in RW19/QMS/01. (Leave blank is not applicable)		Production												
Time	Activity	Waste Type	Incoming waste		Production									
			Is the waste acceptable?	Estimation of quantity (M3)	Is the stockpile free from deterioration?	Is the stockpile material acceptable?	Are oversize/undersize parameters met?	Are Class x materials <1%?	Is feed rate Acceptable?	Are screened output sizes as expected?	Is the Moisture Content acceptable?	Is operational machinery working as expected?		
06:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
07:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
08:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
09:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
10:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
11:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
12:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
13:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
14:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
15:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
16:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
17:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N
18:00			Y / N		Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N	Y / N

Notes (If NO is answered for any section notes must be made of action, seek help from quality manual)

Appendix F - Non Conformity Report (NCR)

Non conformity Report

Ref. no	
Area/Process	
Category	Major/Minor* (* delete as necessary)
Reason	
Description	
Evidence	
Cause	
Correction/ containment	