## Claims:

1. A method for processing mixed waste, comprising the steps of:

    a) separating said waste into at least two parts, comprising: (i) mainly food waste (fines) and (ii) mainly paper and other recyclable material (overs);

    b) pulping said overs; and

    c) washing said overs to obtain a cellulose-rich biomass; and

    d) processing said fines to obtain a cellulose-rich biomass.

2. Method according to claim 1, wherein said separating is effected by at least one screen or trommel.

3. Method according to claim 2, wherein said trommel has a screen size of between 300-500mm.

4. Method according to claim 2 or 3, wherein said trommel has a screen size of between 50-150mm.

5. Method according to any one of claims 1 to 3, wherein the separated fines have a diameter of less than about 200mm.

6. Method according to any preceding claim, wherein following said pulping step b) at least a part of the pulped material is shredded.

7. Method according to claim 6, wherein said shredded material is re-pulped.

8. Method according to any preceding claim, wherein said pulping of the overs (step b)), results in obtaining at least three parts, comprising: (i) a pulp; (ii) other recyclables and dirty wash water.

9. Method according to claim 8, wherein said other recyclables (comprising plastic film and recyclable materials, such as plastic and metal containers), are removed from said pulped material before washing step c).

10. Method according to any preceding claim, wherein said washing step c) generates a non-organic substantially solid stream with a particle size greater than about 1mm.

11. Method according to any preceding claims, wherein said washing step c) includes the use of surfactants, including bio-derived surfactants, and/or enzymes and/or catalysts and/or additives and/or any other suitable agents.

12. Method according to claim 10, wherein said non-organic substantially solid stream is used for thermal combustion or for conversion to synthesis gas (syngas).

13. Method according to any preceding claim, wherein said washing step c) further generates wash water which is optionally processed through biological treatment and recycled back into the main process and/or used for biogas production.

14. Method according to any one of claims 1 to 5, wherein said fines are thermo-mechanically treated to allow breakdown of organic matter without the substantial shrinking of any plastics materials.

15. Method according to claim 14, wherein said thermo-mechanically treated fines undergo density separation to enable separation of (i) heavy particulate material, such as glass and silica; (ii) light particulate material, such as plastics; and (iii) organic matter.

16. Method according to claim 14 or 15, wherein said processing of said fines results in an organic-rich wash water.

17. Method according to claim 15, wherein said light particulate matter is fed back into washing step c) of claim 1.

18. Method for the processing of fines comprising mainly food waste, comprising the steps of thermo-mechanical pulping followed by density separation.

19. Cellulose-rich biomass comprising less than 6% ash or less than 7% ash or less than 8% ash or less than 9% ash or less than 10% ash and a glucan:xylan ratio of between 5-8:1.

20. Use of cellulose-rich biomass according to claim 19 in enzyme hydrolysis and/or for the production of cellulose-rich fibre products.

21. Use according to claim 20, wherein said enzyme hydrolysis is used to produce a sugar solution and/or a lignin-rich solid.

22. Combustible material or syngas obtainable from a non-organic substantially solid stream obtainable by a method according to any one of claims 1 to 18.

23. Combustible material or biogas obtainable from the organic matter extracted from MSW and obtainable by a method according to any one of the claims 1 to 18, wherein the organic matter comprises a cellulose-rich biomass according to claim 19.