

# Clients: Bioenergy Infrastructure Group ("BIG") and Hills Waste Solutions

# Market Due Diligence – Northacre EfW Merchant Waste

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#### **EXECUTIVE SUMMARY**

- BIG and Hills have engaged Tolvik to prepare an independent market due diligence report with respect to the 95ktpa of Merchant Capacity at Northacre EfW which will not be subject to the contract. This Merchant Capacity may be filled with additional contracts prior to Financial Close.
- The report considers a local Market (split into discrete 6 sub-markets). The market is broadly based on a 2 hour drive time, but adjusted to reflect the effects of EfW competition, particularly towards the periphery of the Market. Its broad boundaries are the Bristol Channel, South Coast, Gloucestershire and vicinity of the A34.
- The report focusses on Residual municipal-like C&I Waste and excludes an analysis of Residual LACW. Residual LACW is therefore a source of upside to the analysis in this report with the most likely opportunities being Swindon and the new local authorities arising from the reorganisation of Dorset, Poole and Bournemouth. In the market in 2017 there was 0.76Mt of Residual C&I Waste.
- With respect to future tonnages of Residual Waste, the review considers three tonnage scenarios. These reflect the recent release of the Government's Waste Strategy for England. At one end of the range the "Incremental Change" scenario assumes that recycling rates improve only very modestly with time; at the other, the "Policy Intervention" scenario assumes the Government delivers in full on its proposed actions in the Strategy but that England will nevertheless fall significantly short of the EU's 2035 Circular Economy targets. The Median scenario reflect the estimated probability midpoint to the two.
- Unlike the Policy Intervention scenario where it falls to 0.64Mt, the projected tonnages of Residual Municipal-like C&I Waste in the Market under the Incremental Change and Median scenarios are projected remain relatively flat through to 2035.
- Within the Market there are currently six "Certain" EfWs (i.e. EfWs which are either operational or in construction). By the time these 6 EfWs are operational in 2022, it is projected that these facilities will have a total capacity for the treatment of municipal-like C&I Waste of 0.30Mtpa. In Tolvik's opinion it is reasonable to assume that no Certain EfWs outside the Market are likely to have a material impact on the Market.
- In the 2022 Median scenario modelling suggests across the Market 0.47Mt of Residual C&I Waste (0.77Mt 0.30Mt) potentially available in the Market for Northacre EfW. Of this, 0.13Mt would be potentially available from the Inner Market (the most proximate source to Northacre EfW), whilst competition from Bridgwater EfW, Avonmouth EfW and Severnside EfW suggests little/no Residual C&I Waste would be available in from the West sub-region.

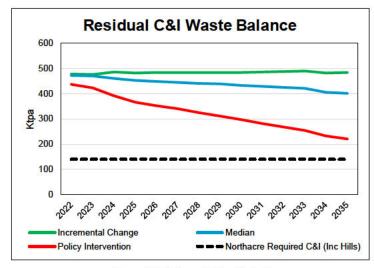


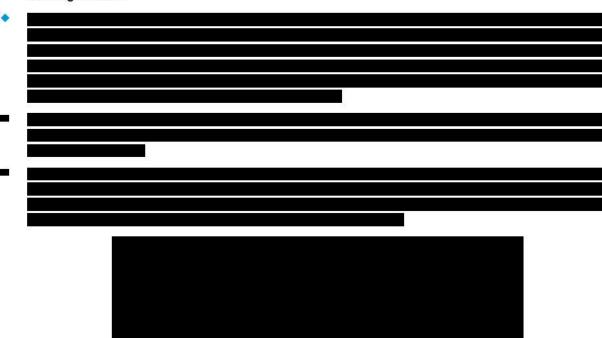
Figure E1: Balance in the Market

 Further modelling shows that, after allowing for the C&I Waste element of the Hills supply contract, in the Median scenario Northacre EfW would need to secure around one quarter of the potentially available municipal-like Residual C&I Waste in the Market if it is to fill the Merchant Capacity. In the



Policy Intervention scenario this rises to 54% by 2035. This declines if Northacre EfW contracts

- It seems reasonable to assume, based on publicly available information, that would be able to meet its indicated tonnage obligations under the proposed additional waste supply contract.
- 6 additional EfWs currently under development have been identified which, if developed, could have a material impact on the Market. Of these, potentially the most significant are 50ktpa Park Grounds EfW (simply on the basis of proximity) and WTI's proposed 500ktpa Harewood EfW in Hampshire. The scale of Park Grounds means it is not expected to materially impact on the availability of municipal-like Residual C&I Waste in the Market but would probably put modest pressure on gate fees. On the other hand, if developed Tolvik rank the probability of development as Medium to Low Harewood EfW could in the longer term (it is probably 2 years from being consented) influence both Residual C&I Waste availability and gate fees.
- It seems reasonable to assume that a contracting strategy which maximises the contracted tonnage
  at Northacre EfW is likely to be the prudent course of action if the probability of development of
  Harewood EfW rises not least because as the probability rises so gate fee expectations in the
  Market are likely to be dampened.
- With the required share of the Residual C&I Waste in the Market Northacre EfW needs to secure being reasonably similar under the two different tonnage scenarios until the late 2020's, competition, from additional EfWs (i.e. Harewood) is likely to have a far more significant impact on future gate fees.





#### 1. BACKGROUND AND APPROACH

#### 1.1. Background

Tolvik Consulting Ltd. ("Tolvik") is a specialist provider of independent market analysis and commercial advisory services to the waste and bioenergy sectors.

Bioenergy Infrastructure Group ("BIG") and Hills Waste Solutions ("Hills") are currently jointly developing a Energy from Waste ("EfW") facility in Westbury, Wiltshire ("Northacre EfW").

It is understood that Residual Waste to Northacre EfW will be supplied by Hills – contracted on a long term basis from

There is also the potential for additional Residual Waste to be contracted to Northacre EfW by way of

The intention is that any remaining "merchant" tonnage to be sourced from the local market on short term/spot contracts.

It is understood that Northacre EfW will be able to accept the full range of Residual Waste types.

BIG and Hills have engaged Tolvik to prepare an independent due diligence report with respect to the 95ktpa of capacity at Northacre EfW which will not be subject to the contract. For clarity, in this report this capacity is termed "Merchant" capacity, irrespective of the ultimate Residual Waste supply contracting arrangements for the facility.

It is to also be noted that as the focus in this report is upon the availability of Residual C&I Waste, where appropriate, to prevent double counting, reference is also made to the

# 1.2. Data Sources

This review has been prepared using a number of data sources including:

- Tolvik's in-house Market Analysis Model which has itself been developed from a range of publicly available data sources.
- DEFRA's 2017-8 Annual Municipal Waste Management statistics and equivalents for the devolved regions;
- EA's Waste Data Interrogator 2017 ("WDI");
- EfW Annual Returns for 2017/8 as provided by EA under Fol requests;
- Various internet searches.

Other sources have been separately identified within the text of the report.

#### 1.3. Residual Waste

In this report **Residual Waste** is defined as solid, combustible, non-hazardous waste remaining after recycling deriving from either LACW or municipal-like C&I Waste and which is similar to Household Waste.

Residual Waste may be presented in three forms:

- Unprocessed "black bag" waste generally EWC 20 03 01;
- Lightly processed Refuse Derived Fuel ("RDF") with EWC 19 12 10 or 19 12 12;
- ◆ A refined Solid Recovered Fuel ("SRF"), prepared to a specification generally for use in a cement kiln (with EWC 19 12 10).

The boundaries between these different presentations of Residual Waste in the UK are blurred and vary with changing commercial/market conditions and so for this report there has been no differentiation between the different presentations of Residual Waste.



It should be noted that Residual Waste definition above **includes** the combustible element of "fines" from Residual Waste processing operations.

# 1.4. Reliance

BIG and Hills shall not be entitled to rely on the draft version of this report but shall be entitled, once executed and in accordance with the terms of Tolvik's engagement, to rely on the Final version of this report.



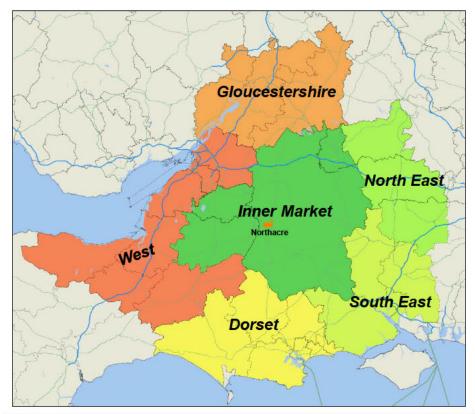
#### 2. DEFINING THE MARKET FOR NORTHACRE EFW

#### 2.1. The Market

Historically, for a report such as this, the approach would have been to develop an assumption with respect to the reasonable drive time distance over which Northacre EfW could source Residual C&I Waste to fill its Merchant capacity, and to then use this "Catchment Area" as the basis for the assessment of the market.

As the Residual Waste market matures, this approach becomes less and less relevant as the impact from competing EfW developments, irrespective of whether or not they lie within the Catchment Area, becomes more significant.

This report has therefore splits the local market ("Market") into 6 discrete sub-markets, informed by a combination of drive time (which is particularly dependent on the road network) and potential EfW competition. It is from this that the assessment of the Market has been made.



| Sub-Market      | Local Authorities  |
|-----------------|--|
| Inner           | Wiltshire, Bath & NE Somerset, Mendip, Swindon                           |
| West            | Somerset (exc Mendip), North Somerset, Bristol and South Gloucestershire |
| Gloucestershire | Gloucestershire  |
| North East      | Vale of White Horse, West Berkshire, Basingstoke and Deane               |
| South East      | Test ∀alley, Winchester, Havant, Southampton, New Forest                 |
| Dorset          | Dorset (excluding Weymouth), Bournemouth, Poole                          |

Figure 1: The Market for Northacre EfW

By way of reference, Figure 2 shows a 2 hour drivetime from Northacre EfW using standard mapping assumptions for HGV movements. There are some differences between this and Figure 1 which reflects the "natural" catchment areas for EfWs located towards the periphery of the Market.



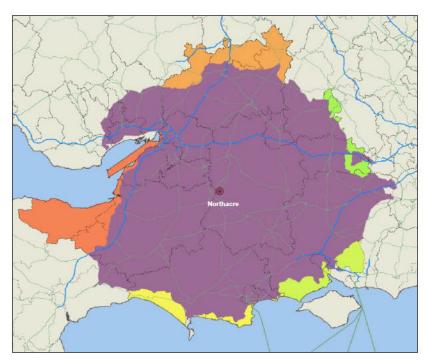


Figure 2: 2 Hour Drivetime from Northacre EfW

# 2.2. Baseline Residual C&I Waste Reconciliation

The first stage of the due diligence is to validate that the underlying data is reliable within an acceptable margin of error given the data quality (which Tolvik has historically assumed to be +/-5%).

The focus on this analysis is upon Municipal-like C&I Waste, as data for Residual Local Authority Collected Waste ("LACW") is reasonably reliable and readily available. Given data availability, particularly in WDI, the validation focusses on the Market at a Waste Disposal Authority ("WDA") level. For this reason, Figure 3 excludes Vale of White Horse (the only part of Oxfordshire WDA in the Market) but significantly includes all of Hampshire and Dorset.

|          |                                     | Total 2017<br>(ktpa) | LACW<br>2017<br>(ktpa) | C&I Waste<br>2017<br>(ktpa) | Source   |
|----------|-------------------------------------|----------------------|------------------------|-----------------------------|--|
| 2017     | Baseline                            |                      |                        | 842                         | Tolvik Market Analysis Model                           |
|          | Total EfW Inputs in Market          | 618                  |                        |                             | Annual Returns – Chineham,<br>Marchwood and Severnside |
| EfW      | Less LACW Inputs                    |                      | (571)                  |                             | Wastedataflow  |
| ш        | C&I Inputs to EfW in Market         |                      |                        | 47                          |  |
|          | C&I Inputs to EfW outside<br>Market |                      |                        | 19                          | EA Incinerator database -<br>Lakeside, Cornwall        |
|          | Total Landfill Inputs               | 982                  |                        |                             | WDI – Residual Waste                                   |
| Landfill | Less LACW Inputs                    |                      | (483)                  |                             | Wastedataflow exc inerts                               |
| Ľ        | C&I Inputs to Landfill              |                      |                        | 499                         |  |
| Export   | Total RDF Exports                   | 512                  |                        |                             | WDI adj for England<br>understatement                  |
| RDF E    | Less LACW Exports                   |                      | (253)                  |                             | Wastedataflow  |
| R        | C&I Waste exports                   |                      |                        | 259                         |  |
| 2017     | Inputs                              |                      |                        | 825                         |  |

Figure 3: Baseline Reconciliation



As Figure 3 suggests, the difference between the data within Tolvik's Market Analysis Model and actual data lies well within the error of margin (at around 2%).

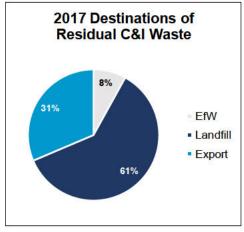


Figure 4: Destinations of Residual C&I Waste

Using the Market Analysis Model, the baseline figure for Residual C&I Waste in the Market in 2017 is a little lower than shown in Figure 3 (as it excludes a significant portion of Hampshire) at 759kt.

As can be seen from Figure 4, in 2017 landfill (61%) was the predominant outlet for Residual C&I Waste in the market.

#### 2.3. Residual LACW

This report excludes an analysis of Residual LACW as it is either contracted long term or unlikely to be available in the market (by public procurement) a suitable scale for Northacre EfW to be able to process. Residual LACW is therefore a source of upside to the analysis in this report with the most likely opportunities being Swindon, Dorset, Poole and/or Bournemouth (highlighted green in Figure 5).

Residual LACW is, however, important in determining the merchant capacity at competing EfWs in the Market.

| Local Authority         | Expiry               | Residual<br>Waste<br>2017/18 | Solution   | Contractor                                  |  |
|-------------------------|----------------------|------------------------------|--|---|--|
| Wiltshire               | 2035                 | 137                          | Westbury MBT + Lakeside<br>EfW                         | Hills                                       |  |
| Swindon                 | 2025                 | 55                           | RDF – currently to export                              | Public Power Solutions<br>(Local authority) |  |
| Bath and NE<br>Somerset | Starts               | 38                           | 40014  | W-4.65-1-1                                  |  |
| Bristol                 | 2020 to<br>2030 with | 97                           | 120ktpa to Avonmouth EfW,<br>50ktpa to Severnside EfW, | West of England Partnership awards to       |  |
| North Somerset          | extension options    | 43                           | 47ktpa to Bristol MRF                                  | Viridor, Suez and ETM                       |  |
| S Gloucestershire       | Options              | 57                           |  |   |  |
| Somerset                | 2031 + options       | 126                          | Avonmouth EfW  | Viridor                                     |  |
| Gloucestershire         | 2041                 | 139                          | Javelin Park EfW                                       | UBB   |  |
| Oxfordshire             | 2035                 | 133                          | Ardley EfW   | Viridor                                     |  |
| West Berkshire          | 2033                 | 38                           | Chineham EfW   | Veolia                                      |  |
| Hampshire               | 2030                 | 367                          | Chineham EfW, Marchwood                                | Veolia                                      |  |
| Southampton             | 2030                 | 76                           | EfW & Portsmouth EfW                                   | Veolia                                      |  |
| Dorset                  | 2021                 | 89                           | Canford MBT + Export plus<br>Marchwood EfW             | Panda, Veolia                               |  |
| Bournemouth             | 2021                 | 44                           | Canford MBT + RDF Export                               | Panda                                       |  |
| Poole                   | 2027                 | 40                           | Canford MBT + Lakeside EfW                             | Panda, Viridor                              |  |

Figure 5: Residual LACW Contracts in the Market



#### 3. ASSUMPTIONS AND PROJECTIONS

#### 3.1. Tonnage Scenarios

This report considers three tonnage scenarios which might (without statistical analysis but using Tolvik's professional judgement) be regarded as a "P95" range – i.e. the range in which future tonnages are projected to fall with a 95% probability. The scenarios, informed by the recent Waste and Resources Strategy for England ("Our Waste, Our Resources: A Strategy for England) - are defined as follows:

- Incremental Change a scenario in which modest, incremental improvements in recycling and resource efficiency are seen, driven by a combination of social attitudes and relatively "light touch" legislative change.
- Median a scenario in which the key elements of the Strategy (and corresponding policies for the devolved regions) are eventually delivered, but beyond which there is limited progress. This scenario is a P50 projection i.e. there is a 50% chance that future Residual Waste tonnages are higher than this figure, and a 50% chance that they will be lower.
- Policy Intervention in which there is legislative and fiscal support for sustained action on recycling and prevention to deliver recycling performance in line with northern European experience, but such action falls short of the necessarily radical (and arguably politically unpopular) changes needed for a step change towards Circular Economy targets.

# 3.2. Recycling Rate Assumptions

The modelling in this report is based on the recycling rates for England as a whole being as set out in Figure 6.

| Cooperie            | Household Waste Recycling |       |       | Municipal - like C&I Waste Recycling |       |       |
|---------------------|---------------------------|-------|-------|--------------------------------------|-------|-------|
| Scenario            | 2017                      | 2030  | 2035  | 2017                                 | 2030  | 2035  |
| Incremental Change  |                           | 46.4% | 47.8% |                                      | 64.1% | 65.0% |
| Median              | 43.2%                     | 49.3% | 50.1% | 60.9%                                | 65.0% | 67.5% |
| Policy Intervention |                           | 52.7% | 55.2% |                                      | 67.0% | 70.0% |

Figure 6: Modelled Recycling Rates

Household Waste recycling rates in England have flat-lined at around 43% over the last few years.

The recycling assumptions in the **Median** scenario draw upon Tolvik's detailed analysis in its "Filling the Gap" report of the potential effects of the Strategy on recycling rates in England. At its core, it assumes that in the period to 2025 Household Waste recycling rates will increase by 4.7% as a result of the Strategy and will rise slowly thereafter.

In the more conservative **Policy Intervention** scenario the effects of the Strategy on Household Waste recycling are as modelled by WRAP of an increase of 7% by 2025. Thereafter modelling draws on the recycling experience in Germany – which showed a sustained growth of around 0.5%pa once a 50% recycling rate was achieved.

The **Incremental Change** scenario assumes that Household Waste Recycling rates see the 4.7% growth assumed in the Median scenario but over a longer time period (to 2035).

In modelling the scenarios for each Local Authority Tolvik has assumed future performance is based on the existing level of separate Food Waste collection and an assessment of its "rurality" (which impacts on recycling performance). Within these parameters it has been assumed that the performance of each Local Authority will be relative to their 2017/18 recycling figure – i.e. after adjusting for new Food Waste collections lower performing Local Authorities will remain low performing. A maximum recycling rate for a single Local Authority has been set at 65%.

For municipal-like C&I Waste the recycling rates are assumed to rise more modestly, reflecting that, currently at around 60.9%, they are currently much higher than those for Household Waste. The Policy



Intervention assumptions in Figure 7 would mean that municipal-like C&I Waste recycling performance is at least as good as that that seen in the rest of Northern Europe.

# 3.3. Waste Growth and Resource Efficiency Assumptions

Aside from recycling rates, the other key factor influencing the future tonnage of Residual Waste in England are waste growth assumptions.

Household Waste growth is primarily driven by population/household growth and municipal-like C&I Waste arisings are generally influenced by Gross Domestic Product ("GDP") for Services. This review assumes:

- Growth in household numbers at a local authority level in line with Office of National Statistics ("ONS") projections (which run beyond 2030);
- National GDP growth for Services of 2.0% (as projected by HM Treasury) adjusted at a regional level to reflect historic regional growth trends.

However, for both Household Waste and municipal-like C&I Waste it has been assumed that there is a degree of "de-linking" between the assumed underlying growth drive and waste generation ("resource efficiency") as set out in Figure 7.

In 2013 DEFRA estimated in its waste market projections a mean resource efficiency effect of 1.0% p.a. for C&I Waste, and following a detailed assessment by Tolvik as part of "Filling the Gap" report, this remains a reasonable assumption for the Median and Incremental Change scenarios.

|                          | Incremental<br>Change | Median  | Policy<br>Intervention |
|--------------------------|-----------------------|---------|------------------------|
| Household Waste          | (0.10%)               | (0.35)% | (0.70)%                |
| Municipal-like C&I Waste | (1.00)%               | (1.00)% | (1.25)%                |

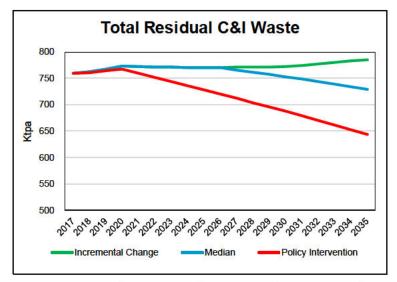
Figure 7: Assumed Annual Resource Efficiency Assumptions



# 4. PROJECTED RESIDUAL C&I WASTE IN THE MARKET

# 4.1. Projected Supply of Residual C&I Waste

Figure 8 shows the effects of the assumptions in Section 3 when applied to the 0.76Mt of Residual C&I Waste in the Market in 2017. It is only in the Policy Intervention scenario that a material change in this tonnage is projected – with a fall to 0.64Mt by 2035.



| Mt                  | 2022 | 2025 | 2030 | 2035 |
|---------------------|------|------|------|------|
| Incremental Change  | 0.77 | 0.77 | 0.77 | 0.79 |
| Median              | 0.77 | 0.77 | 0.75 | 0.73 |
| Policy Intervention | 0.75 | 0.73 | 0.69 | 0.64 |

Figure 8: Projected Residual C&I Waste in the Market

# 4.2. "Certain" EfW Competition in the Market

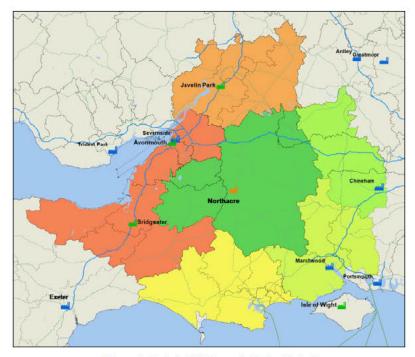


Figure 9: Certain EfW Capacity in the Market



Figure 9 shows the "Certain" EfW capacity in and around the Market – where "Certain" EfW capacity is that EfW which is currently in operation, construction or for which finance is in place and construction imminent.

Within the Market there are currently six Certain EfWs. The figure excludes Avonmouth ACT, designed for the processing of RDF, but which ceased operations in 2016 and if it is to be reopened would focus upon recycled wood biomass.

|              |                       |                             | 2022 Median  |                               |  |
|--------------|-----------------------|-----------------------------|--|-------------------------------|--|
| EfW          | Operational<br>Status | Assumed<br>Capacity<br>ktpa | Contracted Residual LACW   | C&I Waste<br>Capacity<br>ktpa |  |
| Severnside   | Operational           | 380                         | WLWA (302), West of England (50).<br>Assumed North Devon now to<br>Cornwall with West of England win | 28                            |  |
| Chineham     | Operational           | 110                         | Hampshire (70), W Berks (20)   | 20                            |  |
| Marchwood    | Operational           | 203                         | Southampton (60), Hampshire (120),<br>Dorset (10)  | 13                            |  |
| Javelin Park | From Mid-2019         | 181                         | Gloucestershire (133)  | 48                            |  |
| Avonmouth    | From End 2019         | 333                         | Somerset (120), West of England (121)  | 92                            |  |
| Bridgwater   | From 2022             | 100                         |  | 100                           |  |
|              |                       |                             | Total  | 300                           |  |

Figure 10: C&I Waste EfW Capacity in the Market

By the time these 6 EfWs are operational in 2022, it is estimated that there will be a total capacity for municipal-like Residual C&I Waste of 0.30Mtpa.

In Tolvik's opinion it is reasonable to assume that no Certain EfWs outside the Market are unlikely to have a material impact on the Market. This is not necessarily the case for additional EfWs outside the Market – as discussed in Section 4.5.

#### 4.3. Balance in Sub-Markets

Figure 11 compares the tonnage of Residual C&I Waste in each sub-market with the merchant capacity in each sub-market in the 2022 Median scenario. This suggests 0.47Mt of Residual C&I Waste potentially available in the Market for Northacre EfW.

Of this, in this scenario in 2022 0.13Mt is potentially available from the Inner Market (the most proximate source), whilst it would appear that little/ no tonnage is likely to be available from the West sub-market.

| Sub-Market, ktpa | Residual<br>C&I Waste<br>(Fig. 8) | Merchant<br>Capacity<br>(Fig.10) | Balance |
|------------------|-----------------------------------|----------------------------------|---------|
| Inner            | 131                               | 0                                | 131     |
| West             | 213                               | 220                              | (7)     |
| Gloucestershire  | 88                                | 48                               | 40      |
| North East       | 103                               | 20                               | 83      |
| South East       | 158                               | 13                               | 145     |
| Dorset           | 80                                | 0                                | 80      |
| Total            | 773                               | 300                              | 473     |

Figure 11: Balance in the Sub-Market, 2022, Median



The West sub-market is defined specifically to include those facilities with the greatest merchant capacity, and that the EfWs in the West will source municipal-like Residual C&I Waste from Somerset and former Avon, except Bath and Mendip (which are closer to Westbury).

In Tolvik's opinion, there is likely to be little movement of municipal-like Residual C&I Waste from Devon into Bridgwater or from Wales into either of the Avonmouth/Severnside EfWs to reduce the modelled merchant capacity and whilst there may be some movement from Gloucestershire into Avonmouth – such movements would not impact the overall Market balance.



As Figure 11 shows, based on Certain EfWs, material tonnages of municipal-like Residual C&I Waste are expected to be available in the other sub markets.

# 4.4. Projected Market Balance

Figure 12 shows the projected balance between municipal-like Residual C&I Waste in the Market and merchant EfW capacity at the 6 Certain EfWs located in the Market. As can be seen, in the Incremental Change and Median scenarios, the balance remains relatively unchanged – whilst in the Policy Intervention scenario not unsurprisingly the graph reflects the decline in Residual C&I Waste shown in Figure 8.

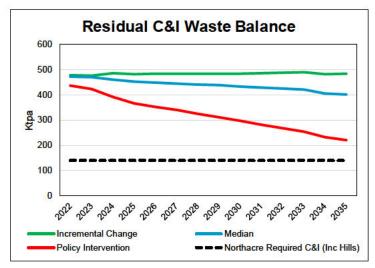


Figure 12: Projected Balance in the Market

Given what is known of the market and Residual C&I Waste contracts the balance shown is a reasonable proxy for the "potentially available" market. It is assumed that in the Market there is no municipal-like Residual C&I Waste contracted on a long term basis for RDF export.

Figure 13 shows that in effect, excluding the Hills contract, in the Median scenario Northacre EfW would need to secure around one third of the potentially available municipal-like Residual C&I Waste in the market if it is to fill the Merchant capacity. In the Policy Intervention scenario this rises to two thirds by 2035. This is arguably an overly conservative analysis as it does not recognise the contracted by Hills which is not Merchant.

Figure 14 reflects Figure 13 but after allowing for the Hills C&I Waste tonnage and adjusting the available market size to prevent double counting).

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| Mt          |                     | 2022 | 2025 | 2030 | 2035 |
|-------------|---------------------|------|------|------|------|
| Balance/    | Incremental Change  | 0.48 | 0.48 | 0.48 | 0.48 |
| Potentially | Median              | 0.47 | 0.45 | 0.43 | 0.40 |
| Available   | Policy Intervention | 0.44 | 0.37 | 0.30 | 0.22 |
| Northacre E | fW C&I Capacity     |      | 0    | .14  |      |
| Required    | Incremental Change  | 29%  | 29%  | 29%  | 29%  |
| Market      | Median              | 30%  | 31%  | 32%  | 35%  |
| Share       | Policy Intervention | 32%  | 38%  | 47%  | 64%  |

Figure 13: Required Market Share - ignoring Hills contract

After allowing for the Hills contract, in the Median scenario Northacre EfW would need to secure around one quarter of the potentially available Residual C&I Waste in the Market if it is to fill the Merchant Capacity. In the Policy Intervention scenario this rises to 54% by 2035.

| Mt                                  |                     | 2022 | 2025 | 2030 | 2035 |
|-------------------------------------|---------------------|------|------|------|------|
| Adjusted<br>Balance/<br>Potentially | Incremental Change  | 0.43 | 0.44 | 0.44 | 0.44 |
|                                     | Median              | 0.43 | 0.41 | 0.39 | 0.36 |
| Available                           | Policy Intervention | 0.39 | 0.32 | 0.25 | 0.17 |
| Northacre EfW Merchant Capacity     |                     |      | 0.   | 095  |      |
| Required                            | Incremental Change  | 22%  | 22%  | 22%  | 22%  |
| Market<br>Share                     | Median              | 22%  | 23%  | 24%  | 27%  |
|                                     | Policy Intervention | 24%  | 30%  | 38%  | 54%  |

Figure 14: Required Market Share – allowing for Hills contract

The potential effect of an additional contract is shown in Figure 15. As can be seen this reduces the required market share by around 5-6% under all scenarios; in the Median scenario the figure is a maximum of 21%.

| Mt   |                      | 2022 | 2025 | 2030 | 2035 |
|--|----------------------|------|------|------|------|
| Adjusted<br>Balance/<br>Potentially<br>Available | Incremental Change   | 0.41 | 0.41 | 0.41 | 0.41 |
|  | Median               | 0.40 | 0.38 | 0.36 | 0.33 |
|  | Policy Intervention  | 0.37 | 0.30 | 0.23 | 0.15 |
| Northacre E                                      | fW Merchant Capacity |      | 0    | .07  |      |
| Required<br>Market<br>Share                      | Incremental Change   | 17%  | 17%  | 17%  | 17%  |
|  | Median               | 17%  | 18%  | 19%  | 21%  |
|  | Policy Intervention  | 19%  | 24%  | 31%  | 47%  |

Figure 15: Required Market Share -

# 4.5. Potential Additional EfWs

6 additional EfWs currently under development have been identified which, if developed, could have a material impact on the Market. These are shown on Figure 16.



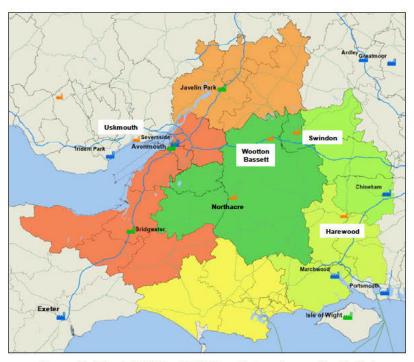
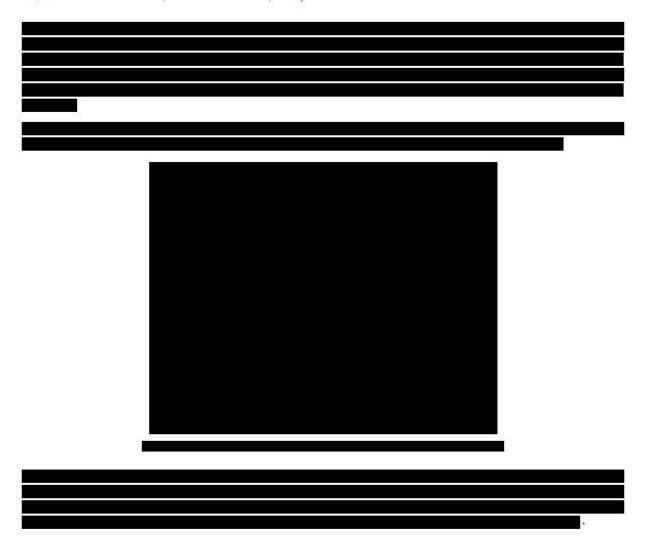


Figure 16: Potential Additional EfW Capacity in and around the Market

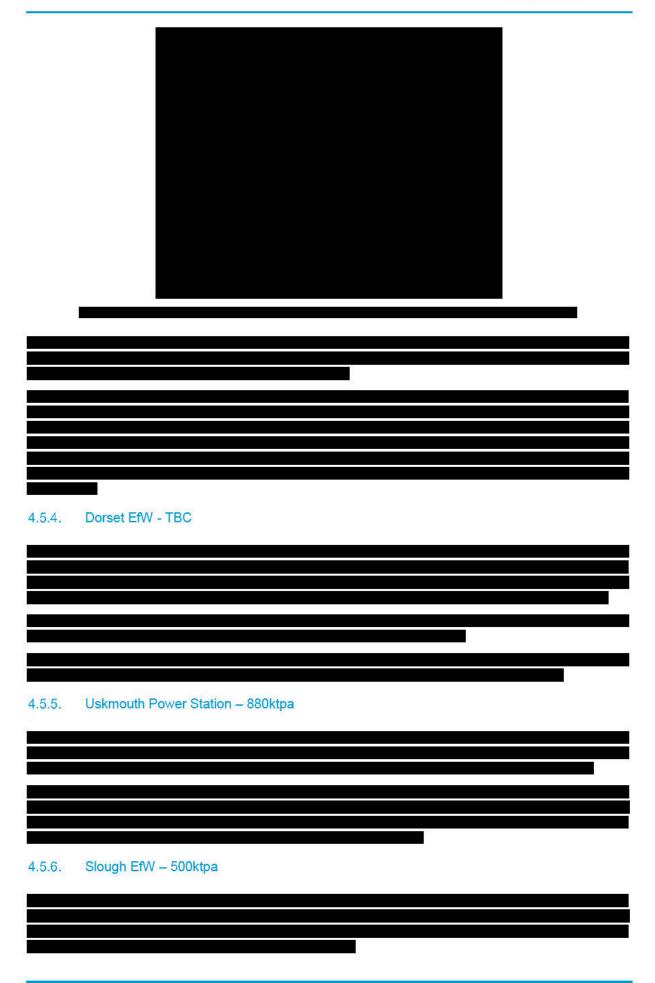
# 4.5.1. Park Grounds, Wootton Bassett, 50ktpa





| 4.5.2. | Honda Swindon, 215ktpa     |  |
|--------|----------------------------|--|
|        |                            |  |
| 4.5.3. | Harewood, Andover, 500ktpa |  |
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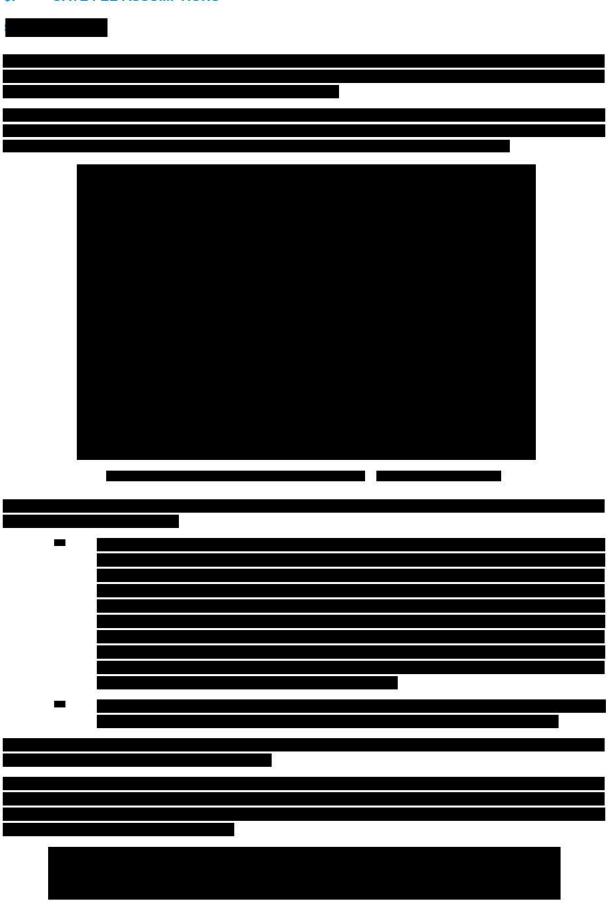




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# 5. GATE FEE ASSUMPTIONS



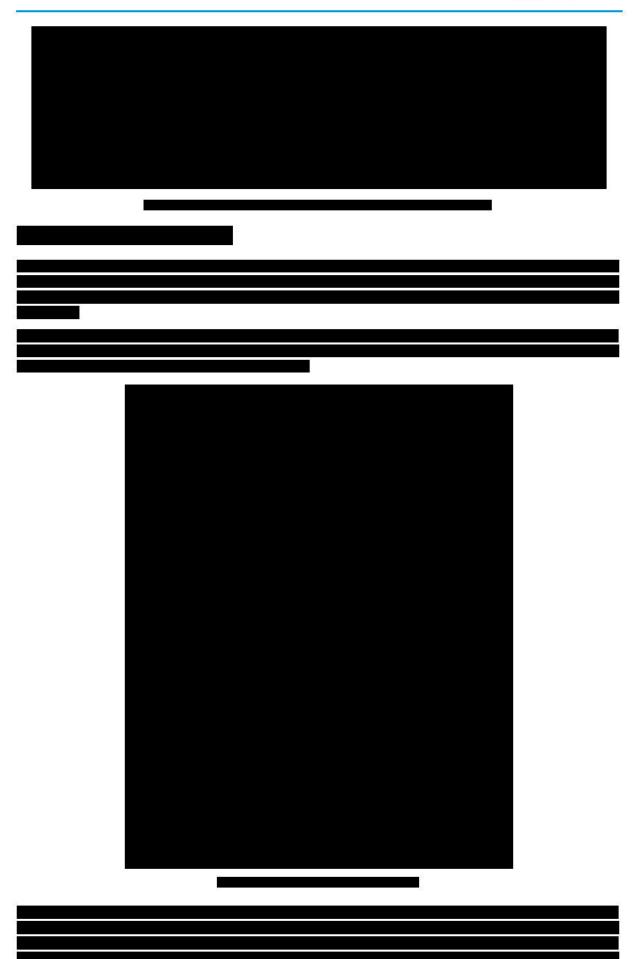


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# **APPENDIX 1 – GLOSSARY**

Certain EfW EfW which are operational or in construction at the date of the report

C&I Capacity C&I Waste capacity at Northacre EfW including Hills 45ktpa - i.e. a

total of 140ktpa

C&I Waste Commercial & Industrial Waste

CfD Contract for Difference

EA Environment Agency

EfW Energy from Waste facility

EWC European Waste Catalogue

Fol Freedom of Information Act

ktpa '000s of tonnes per annum

Merchant Capacity 95ktpa of capacity at Northacre EfW not subject to the Hills 100ktpa

contract

MBT Mechanical Biological Treatment

Mtpa Million tonnes per annum

LACW Local Authority Collected Waste

RDF Refuse Derived Fuel

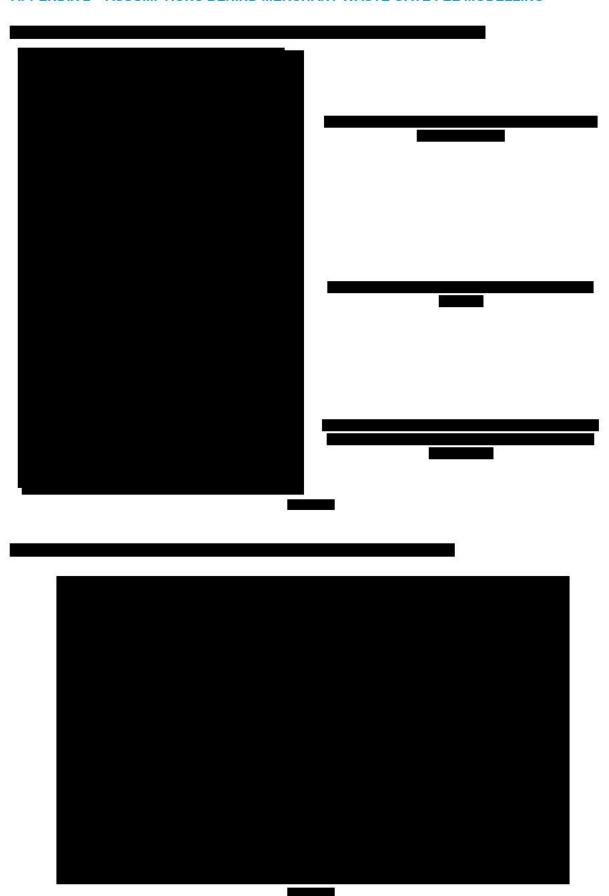
Residual Waste Waste which remains after recycling and composting

SRF Solid Recovered Fuel

WDI Waste Data Interrogator



# APPENDIX 2 - ASSUMPTIONS BEHIND MERCHANT WASTE GATE FEE MODELLING





#### **APPENDIX 3 - SCOPE**

Preparation of a written report, the primary purpose of which is to (a) inform BIG and other investors with respect to the availability of Residual Waste to fill, subject to final contracts, up to 95ktpa of merchant capacity at Northacre EfW and (b) the potential gate fees for such capacity under various contracting scenarios.

It is understood that a further third party report has already been prepared relating to the project and so for this reason the report will not provide any wider context to the UK Residual Waste market.

The scope of the report will cover, at the minimum, the following:

#### a. Uncontracted Fuel

For the 95ktpa of capacity not subject to Hills supply:

- a. Develop a suitable Catchment Area centred Northacre EfW;
- b. Establish a baseline estimate for the current levels of "available" Residual Waste in the market, and current contractual arrangements/availability of this Residual Waste, after including assumptions with respect to the 100ktpa to be provided by Hills;
- c. Develop Equity Base Case and Downside scenarios projecting future tonnages of "available" Residual Waste in the Catchment Area;
- d. Review current, planned and proposed and available competitive treatment capacity in and around the Catchment Area and form a view of the competitive threat posed by such treatment solutions and consequential implications for "available" Residual Waste in the Catchment Area:
- e. Assess the share of the market which Northacre EfW needs to capture so as to ensure that the plant operates at full capacity under various scenarios.

# b. Independent Commercial Assessment

- a. Develop gate fee assumptions for merchant waste (together with indexation assumptions) under (TBC) for use in the Financial Model including
- b. Identify any proposed sensitivities;
- c. Draw overall conclusions with respect to the robustness and deliverability of the merchant waste supply arrangements.