



- 2.2 Notes the purpose and proposed content of the Waste Prevention Plan and delegates approval of the final plan to the Cabinet Member for Clean Streets, Recycling and the Environment, the Cabinet Member for Value for Money and Efficiency, and the Deputy Leader of the Council jointly with the Corporate Director – Place and the Corporate Director – Finance and Governance.
- 2.3 Notes the investment that has been identified relating to the Waste Services infrastructure and the options for financing this investment that will be considered as part of the re-procurement of the waste disposal contract in order to optimise the Council's financial position.
- 2.4 Notes the overview of the Procurement Strategy covering the re-procurement of the Council's waste treatment and disposal services, and notes that a detailed procurement strategy report will be presented at the November meeting of Cabinet.

**Lead Contact Officer(s):** Alan Bowley, Programme Director: Waste Strategy

**Telephone No:** 0121 303 3454

**E-mail address:** alan.bowley@birmingham.gov.uk

## 3.0 Consultation

### Internal

- 3.1 The Waste Strategy Programme Director has continued to meet weekly with the Cabinet Member for Clean Streets, Recycling & Environment, and the Cabinet Member for Value for Money & Efficiency to review the development and drafting of the final Waste Strategy, Waste Prevention Plan and the associated Procurement Strategy. The process included a number of cross-party member workshops to inform the outcome of the options appraisal assessment.
- 3.2 Furthermore, regular progress updates have been considered at two meetings of EMT and the Chief Executive's CLT.
- 3.3 A formal progress report to the Health, Well-Being and Environment Overview and Scrutiny Committee was considered in May 2017.

### External

- 3.4 The draft waste strategy was issued for public consultation in June 2016. The timetable allowed for a 4-week public consultation, via the Council's Be Heard consultation portal and was supported by a number of related events including:
  - A Cabinet Member public webcast
  - Webcast presentation to Health, Well-Being and Environment Overview and Scrutiny Committee by 3Rs Programme Manager
  - Presentation to Birmingham Housing Partnership Board by the Corporate Director, Place, and
  - A number of linked social media campaigns.
- 3.5 Nearly 500 members of the public and wider stakeholders took part in the consultation either directly, by responding via Be Heard, or as part of a series of 6 focus groups – where the key objectives were explained and discussed in more detail. The outcomes of the public consultation were used to directly inform and validate the outcome of the strategy options appraisal process.
- 3.6 **Appendix 1** summarises the key feedback received against each of the key objectives of the draft waste strategy.

## 4.0 Compliance Issues:

### Are the recommended decisions consistent with the Council's policies, plans and strategies?

- 4.1 The proposals in this report contribute to the Council's Vision and Forward Plan as agreed by the Council in May 2017. The strategy is designed to support the Council's Vision and Priorities covering:  
Children – a great City to grow up in,  
Housing – a great City to live in,  
Jobs and Skills – a great City to succeed in,  
Health – a great City to grow old in.
- 4.2 In particular the outcomes of the waste strategy address a number of the issues defined as cross-cutting including:
- **Reduction in percentage of households in fuel poverty:** In recommending the option to retain Tyseley ERF and to invest in that asset to achieve residual life to 2034, the waste strategy provides a direct means to generate power (heat and electricity) that could be utilised within the Council's ambition of establishing a directly-owned energy company.
  - **Improved cleanliness** - streets and public spaces: The Waste Strategy, and in particular the procurement / contracting strategy provides the means for the Council to deliver the cost effective treatment and disposal of all waste streams. This ensures that waste collected by street cleansing and the parks services can be treated at lowest cost, and therefore ensures that service budgets can be targeted at frontline delivery.
  - **Improved air quality:** By investing in existing waste infrastructure across the city, and where possible, locating any new facilities e.g. a potentially new council-owned MRF, within the footprint of the Tyseley Environmental Enterprise Zone, the Council is seeking to minimise 'waste miles' i.e. the distances covered in transporting waste to its final destination for treatment.

### Financial Implications

#### (Will decisions be carried out within existing finance and resources?)

- 4.3 The current Long Term Financial Plans of the Council includes £32.4m in 2017/18 for the current waste disposal contract. This allocation will reduce to £30.9m in 2018/19 (reflecting the part year effect of the expiry of the current contract in January 2019) and to £22.2m per annum on an on-going basis from 2019/20. This reduction reflects the fall out of the financing costs of the initial build of the Energy from Waste facility.

- 4.4 It is proposed that capital investment of £44.2m is undertaken over the next 5 years to upgrade the Energy from Waste facility (ERF) at Tyseley (to ensure a continued operational life of at least 15 years), the potential building of a new Materials Recycling Facility (MRF) – subject to a full and final business case, to modernise the Household Recycling Centres (HRCs), to facilitate greater partnership working with organisations working to promote the reduction and reuse of waste, and Waste Transfer Stations (WTSs) (both to provide a further 30 year operational life). The options for securing value for money from this investment will be considered in the re-procurement of the Waste Disposal Contract (this could be undertaken by the potential service providers with the financing cost reflected in the tender submissions or the investment could be undertaken directly by the Council through prudential borrowing). This strategy is suggested in order to maintain flexibility for the Council and to optimise the Council's medium and long term financial position.
- 4.5 The Waste Strategy and the Waste Prevention Plan are both designed to minimise the volume of waste and this will have a consequential financial benefit for both the cost of processing waste and disposal at landfill.
- 4.6 The approved budgets for the Waste Services include £0.830m in 2017/18 and £0.340m in 2018/19 to complete the development of the Waste Strategy and the re-procurement of the Waste Disposal Contract. This has been funded from corporate resources.
- 4.7 The financial implications of the re-procurement of the Waste Disposal Contract will be affected by a number of factors including the Council's preferred options for the funding of the capital investment and the ownership of the income from the generation of electricity. The full financial implications on the current cash limits for the Waste Disposal Contract and long term financial plans of the Council will be reported in detail in the future executive reports on the award of the new contract. In addition, the procurement process will need to ensure that there is a full evaluation of all options and that there is due regard to current approved cash limits and recognise the continuing pressures on the Council's finances over the medium term.

#### Legal Implications

- 4.8 The Council has a statutory duty to act as both a Waste Collection Authority and Waste Disposal Authority under the Environmental Protection Act 1990.
- 4.9 Under S.111 of the Local Government Act 1972 the Council is entitled to do any thing which is calculated to facilitate, or is conducive or incidental to, the discharge of any of its functions
- 4.10 The Council has a best value duty under the Local Government Act 1999 to improve the efficiency, economy and effectiveness of the services it delivers

#### Public Sector Equality Duty

- 4.11 An Equalities Impact Analysis has not been completed to date but will be undertaken and reported to Cabinet in November as part of the formal procurement report. Furthermore, compliance with equalities legislation will form part of the mandatory selection criteria used at selection stage of the proposed procurement strategy.

## 5.0 Relevant background/chronology of key events:

### 5.1 Purpose of the Waste Strategy

5.1.1 The Council has the ambition, working in partnership with its householders to reduce, reuse and recycle and to develop a more sustainable Birmingham. This means increased recycling and reduced waste arisings.

5.1.2 Respondents to the City's Birmingham 2026 survey identified one of their top priorities as being 'recycling and waste' and subsequently, a goal of the Sustainable Community Strategy, 'Birmingham 2026 – Our Vision for the Future', is 'to recycle a high percentage of household waste'. For this to be possible, a Waste Strategy is vital.

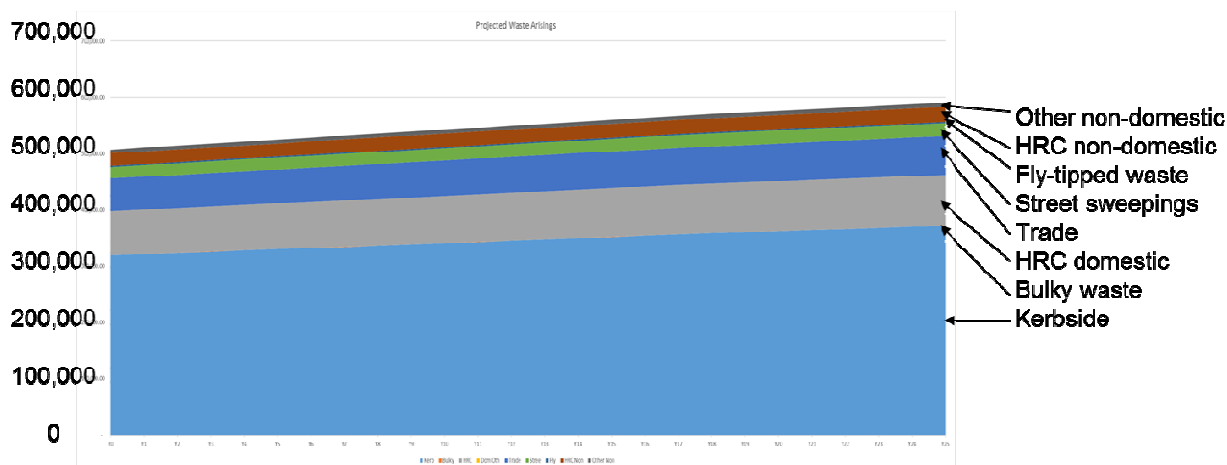
5.1.3 The relevant outcomes identified in the Sustainable Community Strategy, 'Birmingham 2026 – Our Vision for the Future' are listed below:

Birmingham people will be enabled to:

1. Succeed economically
2. Stay safe in a clean, green city
3. Be healthy
4. Enjoy a high quality of life
5. Make a contribution

5.1.4 The Council currently collects around 500,000 tonnes of municipal waste (including 50,000 tonnes of garden waste) from residents and businesses each year. The city is expected to grow by a further 50,000 households by 2031, adding a further 60,000 tonnes to the amount managed by the Council based on current trends. This is illustrated below:

Projected Waste Growth 2015 - 2040



5.1.5 In 2016/17 Birmingham had a kerbside recycling rate of 26.8%. Birmingham's yield for all main dry recycling materials collected is low compared to other cities. Birmingham also has high residual waste levels compared to other authorities and together this influences the relatively low recycling performance.

5.1.6 A composition study of the total waste collected in Birmingham shows that there are significant quantities of food waste (48%), paper and card (16%), garden waste (10%) and dense plastic (9%) within Birmingham's waste stream. This demonstrates the potential there is to increase Birmingham's recycling rate, by diverting more recyclable material from the residual waste into the recycling bin or paper pod. The Waste Prevention Plan (see section 5.3 of this report for further details) will prioritise a programme to tackle the amount of food waste thrown away each week by working with individual households as well local community organisations to promote best practice in this area.

5.1.7 There are also a number of different key drivers that inform the strategy covering:

- Environmental issues including the waste hierarchy, development of a circular economy (where goods are made, used and returned, rather than disposed), and a low carbon agenda;
- Socio-economic, given that by 2031 the city will grow by a further 50,000 households;
- Financial constraints requiring new ways of running important local services so that waste as a resource can help deliver wider outcomes such as cleaner air;
- Technological change requiring us to manage our waste differently; and
- Legal compliance.

## **5.2 Future Waste Strategy 2017-2040 Highlights**

5.2.1 Our vision is for Birmingham to be a city where in 2040;

- waste is reduced wherever possible,
- recycling and re-use is maximised and the value of waste is realised,
- where we cannot prevent, reuse or recycle waste we will maximise recovery through generating energy;
- eliminate waste going to landfill, and
- the people who live here play their part in sharing the environmental, economic and social benefits of viewing waste and utilising as a resource.

5.2.2 In order to deliver the outcomes of reduce, reuse and recycle through waste reduction and the improvement of the levels of recycling, eight objectives have been developed that underpin the strategy and will inform all the design principles of waste services throughout the lifetime of the strategy and will be used to inform the Council's financial plans going forward. The objectives are set out below:

**Birmingham City Council will seek to:**

1. Reduce the amount of waste that is created, reusing and recycling what we can and recovering energy from any remaining waste.
2. Recycle 70% of all our household and municipal waste (e.g. from litter bins and street sweepings) by 2040
3. Reduce the amount of waste generated per person by 10% (compared to a 2014/15 baseline of 345kg per person) by 2025.
4. Eliminate waste sent to landfill by 2040.
5. Manage our waste in a more sustainable way to make a positive contribution to climate change and help reduce carbon emissions. (This will include identifying different ways to collect waste that provide better outcomes in respect of carbon reduction).
6. Develop ways of prioritising the collection of recycling as the composition and type of waste we collect changes over time.
7. Improve our services, reduce costs and use the most appropriate technologies, now and in the future, to manage our waste.
8. Increase the range of materials we (and our partner organisations) collect separately from other waste, for example food waste and/or textiles to achieve our recycling target and to eliminate waste sent to landfill.

5.2.3 The Council has adopted four key principles relating to how we will translate the aims and objectives into a programme of action to change the way waste is managed across the city. The principles include:

Principle 1. A focus on prevention

Principle 2. Creating a circular economy

Principle 3. Working in partnership to reduce and reuse waste

Principle 4. Recycling and Reuse is maximised first

5.2.4 The majority of our waste will be recycled, composted, or used for energy from waste (EfW), with only minimal amounts sent to landfill. Landfill is the least preferable option for dealing with waste in terms of both the waste hierarchy and financial cost. Over the lifetime of the strategy, the quantities of waste being sent to landfill will be reduced, with the ultimate aim of there being no waste sent to landfill by 2040. We currently dispose of around 7.5% (35,000 tonnes) of our waste to landfill, and aim to eliminate this waste being sent to landfill by 2040 through prevention, reuse, recycling and recovery.



- 5.2.5 The strategy also sets out a number of mechanisms for ensuring that sustainable waste management becomes embedded in the behaviour of individuals, businesses and community partners. These are described in summary below:
- **Community Involvement:** The Council has already consulted on the draft waste strategy and the objectives received high levels of support from consultees. The strategy will identify how initiatives such as “Zero Heroes’ will be used to support the behavioural change required to deliver those objectives. In particular, a waste prevention plan will be a key tool for evidencing how local communities can directly inform best practice, with a programme to target a reduction in food waste a key priority going forward.
  - **Partnership Working:** Strong partnership already exists and recent examples include:
    - Working with large retail and manufacturing companies to address the issue of over-packaging,
    - Building stronger relationships with the Greater Birmingham and Solihull Local Enterprise Partnership (GBSLEP) to ensure that local companies and organisations can play a greater, more direct role in how we manage our waste.
    - Talking to local community groups to help share the messages about how to make the small changes that will help us reduce, reuse and recycle more of our waste
  - **Urban Design:** The Council will use Planning Policy to encourage more sustainable management of waste at the planning stage of new builds and redevelopments. For example, working directly with developers to identify innovative underground waste storage solutions. This will help to ensure that sufficient space is provided for waste and recycling bins (individual bins within homes and for communal facilities within flats), and that adequate access is provided for waste and recycling vehicles.
- 5.2.6 The Council will continue to work with external partners to maximise public awareness of waste issues and to increase public participation in waste minimisation, reuse and recycling initiatives. This will include new and existing partnerships with local community groups, social enterprises, charities, schools, and organisations such as WRAP (Waste Resource Action Programme).
- 5.2.7 The final ‘for publication’ version of the Waste Strategy will be completed in time to be included in the suite of documents required to support the proposed procurement process.

### 5.3 Waste Prevention Plan (WPP)

- 5.3.1 The waste strategy prioritises waste reduction as its prime objective and includes an ambition to reduce the amount of waste, under management by the Council by 10% by 2025. This is made more pressing by the fact that the city is expected to grow by a further 50,000 households by 2031, adding a further 60,000 tonnes to the amount managed by the City. However, the Council does not currently have a framework or strategy for delivering waste prevention.
- 5.3.2 In developing the Waste Strategy, a draft Waste Prevention Plan (WPP) has been prepared based on the following aims and objectives:

Overall Aim	Encourage the circular economy and efficient use of resources; reduce resource consumption.
Objective 1	Help householders and individuals to reduce and manage their waste by providing appropriate advice and services
Objective 2	Encourage the reuse, repair and reclamation of items by providing relevant advice and services
Objective 3	Seek to reduce the amount of municipal waste per household by 10% by 2025 compared to the baseline of 2015/16.
Objective 4	Lobby central government and other relevant bodies, such as the West Midlands Combined Authority, to focus on waste as an integral part of sustainable resource management

5.3.3 The structure of the WPP is built around the case for waste prevention and contains the following:

- Details of waste arisings by material
- Target materials e.g. food waste, textiles, etc, and target audiences
- Barriers and opportunities to waste prevention
- Examples of waste prevention across the city
- An action plan for priority materials

5.3.4 The draft plan focuses waste prevention and reuse around a number of priority waste streams as follows:

- Food waste
- Paper and card
- Plastics
- Textiles

It also identifies a range of additional interventions designed to ensure that Household Recycling Centres (HRCs), trade waste and bulky waste collections are able to maximise reuse as part of normal day to day operations

5.3.5 The plan includes deliverables designed to be implemented as follows:

- Short-term – within 18 months
- Medium-term – within 3 years
- Long-term – within 5 years;

and will differentiate between direct interventions e.g. actions to be taken forward by the Council, and indirect interventions e.g where the Council will act to support and facilitate action by third parties, such as social enterprises, local community groups and environmental charities.

5.3.6 The final Waste Prevention Plan will be published alongside the Waste Strategy.

## 5.4 Relationship with other Council strategies

5.4.1 The waste strategy is a key corporate strategy and therefore needs to work alongside a number of key Council strategies / policies. This section of the report examines a number of issues that link waste collections, Tyseley ERF and the wider Tyseley Energy Enterprise Zone (TEEZ) to a number of key energy and low carbon policies.

## Development of City-owned energy company

- 5.4.2 Entry into the energy market and the potential to create an energy company align with the strategic objectives and policies in the Birmingham Development Plan – ‘Planning for Sustainable Growth’. The terms of reference established by the Project Board cover a number of issues that align closely with the draft waste strategy including:
- *Encourage investment in locally generated (decentralised) low carbon and renewable energy, covering heating, cooling, power and vehicle re-charging and re-fuelling for carbon reduction;*
  - *Support community investment in renewable and low carbon projects; and*
  - *Stimulate investment and economic opportunities with Small / Medium Enterprises and utilise university expertise, using the Tyseley Energy Park (TEP) as an area of focus.*
- 5.4.3 Tyseley ERF stands out as a key asset for the energy company given its capacity to generate 30MW of electricity per annum. The treatment of income from power generation will need to be a key consideration in scoping the re-procurement of the management of the plant post 2019.
- 5.4.4 Potential ownership and governance structures, considered for the Birmingham owned energy company, could similarly apply to how the Council manages waste in the future. This would allow the Council to take a more co-ordinated approach to delivering key outcomes as they relate to both the waste strategy and other council initiatives such as reducing fuel poverty and improving air quality.

## Low carbon and clean air strategies

- 5.4.5 Tyseley Energy Park (an area encompassing a significantly wider footprint than Tyseley Energy Recovery facility) has been designated suitable for the development and implementation of a number of renewable energy projects. In particular, a Public Private Partnership between the Council and an external partner will see the development of a low/zero carbon fuelling station providing the opportunity for a range of council and commercial fleets to transition to low and zero carbon fuels including compressed natural gas, liquefied petroleum gas, hydrogen and electric.
- 5.4.6 The waste strategy will provide the strategic context (i.e. retaining the current infrastructure and methodology for waste collections) against which the Council will need to implement a fleet replacement programme capable of achieving the objectives of the low carbon and clean air strategies. The opening of a new low/zero carbon fuelling station in August 2018 provides the infrastructure and therefore removes a key barrier to achieving a cleaner, greener fleet.
- 5.4.7 Furthermore, the Tyseley Energy Park (TEP) may also provide an opportunity to relocate waste collection services from existing depots, primarily Montague Street, that results in a reduction in operational mileage because fleet parking, fuelling and disposal points will potentially co-exist in this area, thus making a further contribution to the Council’s emerging clean air strategy.

## HS2 and relocation of the IBA plant

- 5.4.8 Within the terms of the current contract with Veolia the residual bottom ash, produced by the Tyseley ERF, is sent to a plant in Castle Bromwich for processing. The plant is located on the proposed HS2 route and work has been on-going since late 2015 to put in place an agreement between HS2, the Council and Veolia to relocate the current facility. The package of compensation includes the design and build of a new facility to be located in the TEP area.
- 5.4.9 Local land ownership issues are complex and the HS2 / IBA project team continue to work closely with officers from the waste management team in order to ensure service continuity in the short-term and a 'fit for purpose' new facility going forward. Project timescales do not currently align with the expiry of the current disposal and treatment contract and any legacy resulting from an extended delay in the IBA plant relocation will need to be considered as part of the contracting strategy adopted by the Council.

## **5.5 Preferred treatment technology**

- 5.5.1 A detailed options appraisal process has identified the important continuing role that energy from waste has to play in helping deliver a waste strategy that balances the need to promote the waste hierarchy and deliver value for money. Given that the Tyseley Energy Recovery Facility (ERF) will revert to the Council at the expiry of the current contract means that the Council is well placed to continue to achieve high levels of diversion of waste (currently only approximately 7% of the Council's waste goes to landfill).
- 5.5.2 A technical assessment of the condition of the plant, compared to its 'design life', has concluded that the Tyseley facility can reasonably expect to achieve a minimum of fifteen years residual life post 2019 subject to relevant on-going lifecycle replacement of key asset components. During the lifetime of the current contract this has been the responsibility of Veolia and the associated maintenance costs have been reflected in the contract payment structure. An assessment of Tyseley ERF maintenance needs post 2019 has been completed by the Council and used to inform an investment plan and the contracting strategy are covered in later sections of this report.
- 5.5.3 In addition to committing to Tyseley ERF for the treatment of residual waste, arrangements will need to continue for the treatment and processing of all waste collected at the kerbside by the Council including paper & cardboard, dry mixed recyclables, and garden waste and the proposed arrangements for the treatment and processing of all relevant waste streams are covered in a later section of this report.

## 5.6 Collection arrangements

- 5.6.1 The options appraisal process ruled out the introduction of separate food waste collections on the grounds of increased costs but recognised that the future development of AD (anaerobic digestion) technology, and other technological solutions, such as bio-gas, may result in more cost-effective community based solutions for the treatment of food waste.
- 5.6.2 The Council is embarking on a significant programme of transformation across waste collections, investment in a low-carbon refuse fleet, and the modernisation of the main operational depots. These changes will need a period of consolidation to ensure that the planned benefits (efficiency savings, productivity improvements and improvement in key performance indicators) are realized. On this basis, an immediate and further period of change, required by the rescheduling of all collections rounds (in excess of 100 daily) would result in potentially unacceptable levels of service disruption - considered to be a 'red line' during the initial setting of the options appraisal evaluation criteria.
- 5.6.3 On this basis it is recommended that an option to move to alternate weekly collections (AWC) is not taken forward at this stage.

## 5.7 Processing of recyclates

- 5.7.1 Given the Council's ambitions for supporting a more progressive and sustainable approach to managing its waste in line with the principles of the circular economy a feasibility report has been commissioned to explore the business case for developing a council-owned Materials Recycling Facility (MRF) as opposed to procuring that service through the market.
- 5.7.2 The reason that the development of a council owned MRF warrants further consideration is because of the potential benefits that may result from the project. These include:
- The Council retaining direct control over the processing of its recyclables
  - Increasing the security of MRF processing capacity
  - Improving local air quality by reducing the 'haulage miles' incurred in transporting the materials collected from the kerbside to the point of processing
  - Enabling a degree of flexibility over the range of materials collected and processed in the future
  - Creating new, local jobs in the MRF, estimated to be in the region of 25-30, with additional jobs created in the relevant supply chain
  - Supporting the development of the circular economy locally, and acting as a stimulus for other external investment in other similar facilities.
  - Spare capacity made available to neighbouring authorities, realising a potential income stream

- 5.7.3 The feasibility study will need to address a number of key risks associated with the processing of recyclable materials and inform a final business case, where appropriate. For example in recent years, some recyclable materials have fluctuated frequently between being able to be sold in to the market at a high price, to having to pay a gate fees to off-takers. The quality of recyclable materials is also a critical factor in their price or gate-fee.
- 5.7.4 The prospective capital costs associated with the design and build of a new council-owned MRF have been considered in the next section of this report and the procurement programme allows for either the procurement of the design, build and operate of a MRF, or alternatively the tendering of off-take contracts for all relevant recyclables.

## 5.8 Future investment needs

- 5.8.1 The waste strategy, and the preferred option to support the delivery of the strategy's key objectives are predicated on the need to invest in the current suite of waste facilities available to the Council. A provisional capital requirement of £44.2m has been identified as follows:
- **Tyseley ERF:** To support the refurbishment and replacement of key lifecycle components required to achieve the minimum fifteen year residual plant life post 2019.
  - **Design and build council-owned Materials Recycling Facility (MRF):** As covered in section 5.7 above
  - **Network of waste transfer stations & HRCs:** To deliver essential works to improve site safety (traffic management improvements) and to maintain site operability e.g. replace obsolete electrical systems. These works are considered essential and failure to undertake the works could result in the site(s) having to close.
  - **Upgrade and remodelling of the network of HRCs:** To deliver an enhanced network of HRCs capable of delivering improved outcomes in respect of reuse and recycling.
- 5.8.2 In assessing the value for money associated with the proposed investment in the remodelling of the Council's network of HRCs the programme of upgrades will deliver the following quantifiable and qualitative improvements
- An increase in recycling performance achieved from the network of HRCs from an average of 30% per site to a target of 60% per site
  - An increase in income from recyclates (and the associated savings from avoidance of disposal costs of c£1m per annum across all sites
  - Creating capacity to handle additional volumes of waste resulting from the forecast increase in population in the period 2021-2031 equivalent to an additional 15,000 tonnes per annum
  - An improved user experience because of re-designed layouts and improved traffic management arrangements
  - Providing waste storage arrangements in accordance with Environment Agency guidance and industry best practice.

## 5.9 Procurement strategy

- 5.9.1 One of the key deliverables of the waste strategy is the requirement to have a procurement strategy that will ensure suitable contracting arrangements (or alternative delivery models) are in place ahead of the expiry of the current contract in January 2019.
- 5.9.2 **Contract Packaging** - From the outset of the options appraisal process retaining flexibility has been a key consideration and this has informed much of the thinking in respect of how best to go to market across the different services and waste streams. In particular, there is a need to balance managing risk, achieving value for money, ensuring high levels of performance, and 'future proofing' the service wherever possible.
- 5.9.3 A series of workshops have reviewed the full range of options available to the Council including how services might be packaged together, how the specification will describe what services / works need to be delivered and the method or procurement, and based on that exercise the following combination of 'lots' offer the Council the optimal packaging mix.

### Contract Packaging

Package #1 End Treatment	Package #1 Integrated Transfer Stations & HRCs	Package #2 Independent HRCs	Package #3 MRF	Other separate packages
EFW Clinical waste incineration IBA recycling Landfill	Management of transfer stations including haulage  Management of co-located HRCs - all waste streams	Management of independent HRCs – all waste streams	Design Build Operate Recyclate sales (subject to Feasibility Study)	Green waste Hazardous waste (domestic / fly tips) Emergency response Waste education Wet waste

- 5.9.4 This mix of contracts offers a different solution compared to the current contract with Veolia. In particular, the option to go to market for the management of the two independent (i.e. HRCs that do not also include the management of waste transfer station functions) allows the Council to develop alternative delivery models that will actively encourage the third sector, and social enterprises to help deliver the Council's priorities around waste reduction and reuse.
- 5.9.5 As already identified earlier in the report a feasibility study is examining the business case for a council-owned MRF. Subject to the outcome of that study the design, build and operation of a MRF would also operate as a stand-alone contract, and be included in a programme of procurement to be completed by January 2019 (and include the temporary provision of off-take arrangements for recyclables until the new facility is commissioned)
- 5.9.6 Finally, there is a requirement to continue to market test arrangements across a range of smaller waste streams and this will roll-forward with each waste stream being packaged separately and in accordance with the strategy of maximising competition by ensuring smaller, more local waste companies are able to bid. Although this packaging mix offers a number of benefits it does create a degree of complexity in terms of managing the interface ('performance') risks where different contractors rely on each other to deliver effectively, which in turn will increase the demand on contract management resources.

5.9.7 **Contract Length** - Linking the future investment needs with considerations around relevant length of contract(s) has informed the above packaging mix. More importantly, the programme of works associated with package 1 and package 3 lends itself to a contract period of between 5 and 7 years (subject to final technical due diligence on the condition of the Tyseley plant), where the Council chooses to directly fund the investment.

5.9.8 This is because this approach balances the need to programme the works over an appropriate timescale without tying in the Council to long-term contracts, which in turn limits flexibility to respond to technological change or other changes affecting the waste industry i.e. new ways of collecting different waste streams. The final decision on contract periods will be delegated in line with the governance arrangements described in a later section of this report.

5.9.9 For the 'other' waste streams identified the contracting strategy will allow each waste stream to be market-tested on a frequency that best suits the conditions that apply at that time i.e. longer contracts to mitigate against market volatility, or to retender regularly to extract maximum value from the market. The typical contract length for the waste streams in question will be 3-5 years.

## 5.10 Procurement Timetable

5.10.1 The proposed procurement strategy needs to be delivered within a prescribed and tight timescale with all relevant contracts in place and operational by January 2019 i.e. to coincide with the expiry of the current contract with Veolia Environmental Services. In order to achieve this outcome the Council's procurement team have put together an outline timetable which is set out below:

Activity	To be completed by
Cabinet approves waste strategy report	October 2017
Cabinet approves procurement strategy report	November 2017
Council publishes OJEU Notice	November 2017
Shortlisting of companies and issue of Invitation to Tender	January 2018
Competitive dialogue including submission of outline/detailed solutions	July 2018
Submission of Final Tenders	September 2018
Preferred Bidder decision	October 2018
Contract(s) 'Go Live'	January 2019

5.10.2 The high-level timetable will inform a more detailed milestone plan that will be managed through the project governance arrangements.

5.10.3 The procurement process will need to ensure that there is a full evaluation of all options and that there is due regard to current approved cash limits and recognise the continuing pressures on the Council's finances over the medium term.



## 5.11 Project Governance

5.11.1 It is common practice in waste disposal projects of this size and scale to put in place a Project Board, that operates with appropriate delegation to the relevant Cabinet Member(s) and the appropriate Chief Officer. The purpose of the Project Board will be to speed up the project providing direction at key stages throughout the project.

5.11.2 The Project Board should be structured with the following key roles:

- Board chair – Cabinet Member for Clean Streets, Recycling & Environment
- Board vice-chair – Cabinet Member for Value for Money & Efficiency
- Board member – Deputy Leader of the Council
- Governance lead – Corporate Director Place
- Finance lead – Place Finance Manager
- Legal lead – Senior Solicitor, Service Delivery and Procurement Law Team
- Procurement lead – Director of Commissioning and Procurement
- Waste lead – Programme Director: Waste Strategy

5.11.3 The terms of reference of the Board will be developed in consultation with the chair and vice-chair of the proposed Project Board. The Project Board will be supported by an officer project team, led by a Programme Director, and supported by external advisers and relevant council colleagues.

5.11.4 Due to the complex nature of the Council's requirements, the procurement process for Package 1 will require the use of the Competitive Dialogue Procedure, details of which will be detailed in a Procurement Strategy submitted to November Cabinet.

5.11.5 The remainder of the packages will follow traditional procurement processes (Open and/or Restricted) which do not need to commence in 2018. These will be set out in procurement strategies to be submitted in accordance with the procurement governance arrangements by April 2018.

## **6.0 Evaluation of alternative option(s):**

- 6.1 Essential to the waste strategy has been the need to identify the range of options available to the Council in respect of:
- Working towards delivering its long term aims and ambitions for a more sustainable waste management across Birmingham, and
  - Putting in place necessary arrangements for the treatment and disposal of waste on the expiry of the current contract with Veolia in January 2019.
- 6.2 Given the long-term implications of the outputs of the options appraisal exercise it was agreed that the process needed to build an understanding of the issues and a commitment to the outcomes amongst elected members and senior officers. To facilitate this a six-stage process, supported by 4 technical working meetings was agreed and rolled out across the period July-December 2016.
- 6.3 External advisers were commissioned to work with the Council to develop a 25 year waste flow model designed to a) understand current levels of performance for recycling, diversion from landfill and waste sent to landfill and b) to forecast potential future waste arisings and recycling performance in order to predict future infrastructure requirements and to inform target setting. The waste flow model has been used to test different recycling and reuse performance scenarios and to allow the Council's external financial advisers to build a relevant cost model for the same strategy period that has directly informed the outputs from the options appraisal process.
- 6.4 Appendix 2 provides details of the mandatory requirements used to test a long list of technology options and the weighted evaluation criteria used to test the shortlisted options
- 6.5 The mandatory requirements and priorities were used to initially filter the long list of options and where an option was considered to contravene one of the mandatory requirements it was deselected. Appendix 3 shows those options (highlighted in red) not taken forward for further consideration after applying the mandatory requirements.
- 6.6 Given the high number of potential permutations available after applying the mandatory criteria a high-level Red, Amber Green rating was applied to each of the long-listed options. Only those options with a net positive green rating i.e. scored green on more criteria than red were taken forward for detailed modelling. Appendix 4 identifies the current service configuration (option 0), which is considered to be the current baseline, and nine further shortlisted options.

## 7.0 Reasons for Decision(s):

7.1 The outcome of the options appraisal process including the detailed cost modelling and the application of the weighted evaluation criteria resulted in option 2 ranking as the preferred option, closely followed by option 7 scoring better than the other remaining options (with less than 1% difference between option 2 and option 7). The service profile for both options is similar with the key difference being that option 2 has Tyseley ERF retained as the preferred method for treating waste, compared to option 7 which assumes the need for a replacement Energy from Waste plant.

Options Appraisal Preferred Solution Matrix

	Residual	Food Waste	Green Waste	Recycling	Collections
2	Tyseley for 15 years, then merchant EfW	No food waste treatment	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	AWC – (fortnightly recycling and refuse, no food waste collection)
7	New EfW	No food waste treatment	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	AWC – (fortnightly recycling and refuse, no food waste collection)

**Signatures**

**Date**

Cabinet Member

.....  
Cllr Lisa Trickett, Clean Streets, Recycling and Environment

Cabinet Member

.....  
Cllr Majid Mahmood, Value for Money and Efficiency

Chief Officer

.....  
Jacqui Kennedy, Corporate Director - Place

**List of Background Documents used to compile this Report:**

None

**List of Appendices accompanying this Report (if any):**

1. Public Consultation: Strategy Objectives & Key Messages
2. Options Appraisal Mandatory Requirements & Weighted Evaluation Criteria
3. Technology and Collections Long List
4. Shortlisted Options Subject to Detailed Evaluation
5. Public Sector Equality Duty

## Appendix 1.

### Public Consultation: Strategy Objectives & Key Messages

#	Objective	Key message from public consultation feedback
1	We want Birmingham to reduce the amount of waste that is created, reusing and recycling what we can and recovering energy from any remaining waste	Role of packaging features strongly in respondents desire to see reduce and reuse prioritised
2	By 2040 we will recycle 70% of all our household and municipal waste	Could 70% recycling could be achieved sooner than 2030
3	We aim to reduce the amount of waste generated per person by 10% by 2025	Should we be setting higher target for % of waste reduction
4	We therefore aim to eliminate waste sent to landfill by 2040	Wanting to see more details about how we might achieve this
5	We will identify different ways to collect waste that provide better outcomes in respect of carbon reduction	Yes, but not necessarily at expense (and quality) of other services
6	As the composition and type of waste we collect changes over time, we will develop ways of prioritising the collection of recycling	Instead, emphasis on making the recycling service simpler and easier to use
7	Innovation and efficiency have an important part to play in ensuring that we improve our services, reduce costs and use the most appropriate technologies, now and in the future, to manage our waste	Flexibility and relevant local solutions feature prominently in a majority of responses
8	To achieve our recycling target and to eliminate waste sent to landfill we need to increase the range of materials we (and our partner organisations) collect separately from other waste	Yes, but will need clear, consistent, simple messaging

## Appendix 2.

### Options Appraisal Mandatory Requirements & Weighted Evaluation Criteria

#### Mandatory Requirements & 'Red Lines'

Must Have	Nice to have	Must not
<p>Solution must meet statutory obligations and be legally compliant</p> <p>Solution must be deliverable – this includes technology that has been proven to scale for treating similar waste.</p> <p>Must meet Council's affordability envelope for waste</p>	<p>70% recycling rate</p> <p>100% diversion from landfill</p>	<p>Reduce recycling rate compared to current levels of performance</p> <p>Increase waste to landfill compared to current levels of performance</p> <p>Inhibit the Council's flexibility in the long term. For example, in order to manage change and/or adopt innovative technology</p> <p>System implementation must not disrupt service</p>

#### Weighted Evaluation Criteria

Level 1	%	Level 2	%
<b>Technical</b>	14	Technical Deliverability (Collections and Technology)	5
		Flexibility of solution	6
		Sustainability of markets for recyclates	2
		Sustainability of markets for inputs and outputs	2
<b>Deliverability</b>	20	Planning	2
		Land take	1
		Public acceptability	8
		Compliance with local policy	4
		Implementation timeline	5
<b>Cost</b>	26	Total cost of option	26
<b>Environmental</b>	21	Greenhouse gas reduction potential	2
		Local amenity	3
		Transport impact	3
		Aesthetics	0*
		Waste hierarchy contribution	4
		Landfill diversion	3
		Recycling rate	5
<b>Social</b>	19	Local community benefits (job creation)	6
		Local community benefits (energy and heat)	9
		Local community benefits (self sufficiency)	4

\* Aesthetics scored <1% and was rounded to zero to ensure all criteria added to 100%

**Appendix 3**

Technology and Collections Long List

Residual waste treatment	Food waste treatment	Green waste treatment	Recycling	Change to Collections
New EfW	AD - New	Open windrow - New	MRF - New	No change
Tyseley for 15 years, then merchant EfW	AD - Merchant Capacity	Open windrow - merchant capacity	MRF - merchant capacity	Separate food waste collections
Tyseley for 15 years, then new EfW	IVC - New			AWC - fortnightly residual and weekly recycling collections
ATT - Pyrolysis	IVC - Merchant Capacity			AWC - fortnightly residual and weekly recycling and food waste collections
ATT - Gasification	AD (as part of MBT)			Source segregated
MBT - New	IVC (as part of MBT)			Co-mingled food and green
MBT - Merchant Capacity	Small Scale AD			
Landfill				
RDF production - export				
RDF production - UK merchant capacity				
RDF production - EfW New				

## Appendix 4

### Shortlisted Options Subject to Detailed Evaluation

	Residual	Food Waste	Green Waste	Recycling	Collections
0	Tyseley for 15 years, then merchant EfW	No food waste treatment	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	No Change (Weekly residual, fortnightly recycling, no food waste collection)
1	Tyseley for 15 years, then merchant EfW	No food waste treatment	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	Weekly recycling, fortnightly refuse, no food waste collection
2	Tyseley for 15 years, then merchant EfW	No food waste treatment	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	AWC – (fortnightly recycling and refuse, no food waste collection)
3	Tyseley for 15 years, then merchant EfW	AD – New	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	AWC – residual, recycling and food waste
4	Tyseley for 15 years, then merchant EfW	AD – Merchant Capacity	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	AWC – residual, recycling and food waste
5	New EfW	No food waste treatment	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	No Change (Weekly residual, fortnightly recycling, no food waste collection)
6	New EfW	No food waste treatment	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	Weekly recycling, fortnightly refuse, no food waste collection
7	New EfW	No food waste treatment	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	AWC – (fortnightly recycling and refuse, no food waste collection)
8	New EfW	AD – New	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	AWC – residual, recycling and food waste
9	New EfW	AD – Merchant Capacity	Open Windrow composting – Merchant Capacity	MRF – Merchant Capacity	AWC – residual, recycling and food waste



## Equality Act 2010

The Executive must have due regard to the public sector equality duty when considering Council reports for decision.

The public sector equality duty is as follows:

- 1 The Council must, in the exercise of its functions, have due regard to the need to:
  - (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by the Equality Act;
  - (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
  - (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.
- 2 Having due regard to the need to advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:
  - (a) remove or minimise disadvantages suffered by persons who share a relevant protected characteristic that are connected to that characteristic;
  - (b) take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it;
  - (c) encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.
- 3 The steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include, in particular, steps to take account of disabled persons' disabilities.
- 4 Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:
  - (a) tackle prejudice, and
  - (b) promote understanding.
- 5 The relevant protected characteristics are:
  - (a) Marriage & civil partnership
  - (b) Age
  - (c) Disability
  - (d) Gender reassignment
  - (e) Pregnancy and maternity
  - (f) Race
  - (g) Religion or belief
  - (h) Sex
  - (i) Sexual orientation