Agenda

AGENDA for a meeting of the COMMUNITY SAFETY AND WASTE MANAGEMENT CABINET PANEL in COMMITTEE ROOM B at County Hall, Hertford on FRIDAY 4 MARCH 2016 at 10.00AM

MEMBERS OF THE PANEL (11) (Quorum 3)

M Bright, M J Cook, R J Henry, N A Hollinghurst, T Hunter (Vice- Chairman), T R Hutchings, P F J Knell, A Lee, A M R Searing, R A C Thake (Chairman), C B Woodward

Meetings of the Cabinet Panel are open to the public (this includes the press) and attendance is welcomed. However, there may be occasions when the public are excluded from the meeting for particular items of business. Any such items are taken at the end of the public part of the meeting and are listed under "Part II ('closed') agenda".

Committee Room B is fitted with an audio system to assist those with hearing impairment. Anyone who wishes to use this should contact main (front) reception.

Members are reminded that all equalities implications and equalities impact assessments undertaken in relation to any matter on this agenda must be rigorously considered prior to any decision being reached on that matter.

PART I (PUBLIC) AGENDA

1. MINUTES

To note the Minutes of the Community Safety and Waste Management Cabinet Panel meeting held on 10 February 2016 (attached).

2. PUBLIC PETITIONS

The opportunity for any member of the public, being resident in or a registered local government elector of Hertfordshire to present a petition relating to a matter with which the Council is concerned, and is relevant to the remit of this Cabinet Panel, containing 100 or more signatures of residents or business ratepayers of Hertfordshire.

Notification of intent to present a petition must have been given to the Chief Legal Officer at least 20 clear days before the meeting where an item relating to the subject matter of the petition does not appear in the agenda, or at least 5 clear days where the item is the subject of a report already on the agenda.

No notification of intent to present a petition has been received.

[Members of the public who are considering raising an issue of concern via a petition are advised to contact their local member of the Council. The Council's arrangements for the receipt of petitions are set out in Annex 22 - Petitions Scheme of the Constitution.]

If you have any queries about the procedure please contact Nicola Cahill, by telephone on (01992) 555554 or by e-mail to Nicola.cahill@hertfordshire.gov.uk.

3. POLICE AND CRIME COMMISSIONER

Members may ask questions of the Police and Crime Commissioner for such period of time as the Panel Chairman may reasonably decide.

4. POLICE AND CRIME PANEL

a) The Council's representative on the Police and Crime Panel (PCP) (P A Ruffles) to report on the business of the PCP

b) Members of the Panel may ask questions to the PCP Representative thereon for such period of time as the Panel Chairman may reasonably decide.

5. CO-LOCATING FOUR LIBRARIES WITH RETAINED FIRE STATIONS

Report of the Director Community Protection (Chief Fire Officer)

6. COMMUNITY PROTECTION DIRECTORATE QUARTER 3 2015/16 PERFORMANCE UPDATE

Report of the Director Community Protection (Chief Fire Officer)

7. WASTE MANAGEMENT PERFORMANCE MONITOR

Report of the Chief Executive & Director of Environment

8. PROPOSED MEDICAL RESPONSE IN ASSOCIATION WITH EAST OF ENGLAND AMBULANCE SERVICE

Report of the Director Community Protection (Chief Fire Officer)

9. ALTERNATIVE FINANCIAL MODEL (AFM) FUNDING REVIEW

Report of the Chief Executive & Director of Environment

10. FUTURE DIRECTION OF THE RESIDUAL WASTE TREATMENT PROGRAMME
Report of the Chief Executive & Director of Environment

11. OTHER PART I BUSINESS

Such Part I (public) business which, if the Chairman agrees, is of sufficient urgency to warrant consideration.

PART II ('CLOSED') AGENDA

EXCLUSION OF PRESS AND PUBLIC

Part II business has been notified. The Chairman will move:-

"That under Section 100(A) (4) of the Local Government Act 1972, the press and public be excluded from the meeting for the following item/s of business on the grounds that it/they involve/s the likely disclosure of exempt information as defined in paragraph/s paragraphs 3 and 5 of Part 1 of Schedule 12A to the said Act and the public interest in maintaining the exemption outweighs the public interest in disclosing the information."

PART II AGENDA

1. FUTURE DIRECTION OF THE RESIDUAL WASTE TREATMENT PROGRAMME

If you require further information about this agenda please contact Nicola Cahill, Democratic Services, on telephone no (01992) 555554 or email Nicola.cahill@hertfordshire.gov.uk

Agenda documents are also available on the internet at: https://cmis.hertsdirect.org/hertfordshire/Calendarofcouncilmeetings.aspx.

HERTFORDSHIRE COUNTY COUNCIL

COMMUNITY SAFETY & WASTE MANAGEMENT CABINET PANEL

FRIDAY 4 MARCH 2016 AT 10.00AM

CO-LOCATING FOUR LIBRARIES WITH RETAINED FIRE STATIONS

Agenda Item No.

5

Report of the Director Community Protection (Chief Fire Officer)

Author: Chris Bigland – Assistant Chief Officer Service Support
Taryn Pearson – Assistant Director Libraries & Customer Service
Angela Bucksey – Assistant Director Property

Executive Members: Richard Thake - Community Safety & Waste Management
Teresa Heritage - Public Health, Localism & Libraries,
Chris Hayward - Resources & Performance

1. Purpose

1.1 The purpose of this paper is to brief Panel Members on feasibility work completed in considering the opportunity to co-locate four libraries with retained fire stations in the county. The towns/villages included in this project are Buntingford, Redbourn, Sawbridgeworth and Wheathampstead.

1.2 Department for Communities and Local Government (DCLG) Fire & Rescue Service Transformation Grant Funding of £700,000 was secured in October 2014 to support the project.

1.3 During the last year feasibility work has considered the viability of delivering the project's outcomes (Section 3.2) at each of the four sites. The feasibility work has shown the services' requirements and project objectives can be met at all four sites and we are now seeking approval to progress the project to the next stage of delivery.

2.0 Recommendation

2.1 That the Cabinet Panel considers and comments upon the content of the report.

3.0 Background

3.1 In October 2014 DCLG advised "in principle" agreement to HFRS' (Hertfordshire Fire and Rescue Service) bid for Grant Funds within the Fire & Rescue Service Transformation Programme (small scale funding pool < £2m per application). Grant Funding of £700,000 was awarded towards a co-location and integration project concerning four Libraries and their local retained Fire Stations.

3.2 The core objectives of the bid were as follows:

- To co-locate retained fire stations with another local service to improve asset utilisation.
- To support the *Inspiring Libraries* Strategy in addressing the need to relocate or re provide 11 libraries, which include three libraries in this project.
- To innovatively redesign under-utilised space within retained fire stations and create extensions, as necessary, to deliver a multi service property asset.
- To deliver four library buildings that are bright, attractive, welcoming, flexible, tech-enabled spaces in convenient locations.
- To support the *Inspiring Libraries* Strategy, HFRS and HCC's drive to reduce revenue costs by co locating HCC properties, thereby reducing overall property running costs for the two services.
- To release surplus public sector assets.

3.3 The four settlements identified for the programme were as follows:

	Settlement	FRS Location	Current Library Location
1	**Buntingford**	Station Road	77 High Street
2	**Sawbridgeworth**	Station Road	The Forebury
3	**Redbourn**	High Street	Lamb Lane
4	**Wheathampstead**	Marford Road	Marford Road

3.4 Three of the library sites are held freehold. Outline schemes have been modelled to have assurance on the potential capital receipts. At these sites, on agreement to progress, the next step will be to submit regulation 4 Planning Applications to the relevant District Planning Authorities for the designate disposal sites and simultaneously lodge Regulation 3 Planning Applications for alterations and extensions to create integrated fire station / libraries.

The Public Consultation activities and timing of submission of the Applications will be carefully scheduled in order to provide full clarity as to HCC' intentions for library re-provision.

3.5 Wheathampstead Library is held under a lease from the Parish Council. The original contractual lease term has already expired. HCC can therefore exit the lease liability without contingent liability risk at any time upon 6 months' prior notice. Wheathampstead Parish Council have plans to refurbish the Memorial Hall, this may have implications for the library moving forward.

4. Feasibility of the Project in meeting the Service's Requirements

4.1 The feasibility work has concluded that the core objectives of the DCLG Fire & Rescue Service Transformation Grant Funding can be achieved at all four sites. In essence improving and sustaining county council services in four small towns/villages in the county, whilst reducing the County Council's revenue expenditure in the long term.

From Hertfordshire Fire and Rescues' perspective the services asset

utilisation will be greatly improved. Making these sites more cost effective through partnering with another service and making the site available for greater community use throughout the day and evening.

Sharing common areas/ facilities to avoid local duplication and realising revenue cost savings on property overheads.

Creating the opportunity to engage with library users to promote key fire safely messages and a broader understanding of the service, whilst using the draw of a visit to the fire station to broaden the libraries client base.

4.2 The Library Service see's the project as a major opportunity to re provide four libraries and deliver purpose built, ground floor, developed sites that will meet the service's ambition of bright, attractive, welcoming, flexible, tech-enabled spaces in convenient locations, whilst reducing revenue expenditure.

Based on condition, suitability, size and location Buntingford, Redbourn and Sawbridgeworth libraries where identified within the *Inspiring Libraries Strategy* as high priority to relocate or re-provide by actively seeking opportunities to work with partners. These buildings if retained would be particularly high cost to improve and maintain to meet the ambitions of the *Inspiring Libraries Strategy*.

Co-locating Wheathampstead Library with the retained fire station will reduce its revenue expenditure in terms of no longer paying lease costs.

The additional significant advantage of this project is the opportunity to design these libraries to deliver the *Inspiring Libraries* strategy. At Buntingford to increase the public accessible space and greatly improve the facilities to meet a Tier 2 library's requirements. At Redbourn, Sawbridgeworth and Wheathampstead to design the libraries specifically as Community Libraries run as partnerships between the Library service and local community groups, and supervised primarily by volunteers.

Having libraries co-located with retained fire stations presents the opportunity for the service to enhance its engagement with people who are interested in the Fire Service, in particular boys and dads.

4.3 The proposed library re-provision will be as follows:

	Settlement	**Accessible Public Library Space m²**	
		Current	**Proposed**
1	Buntingford	146*	168
2	Sawbridgeworth	105**	99
3	Redbourn	110	116
4	Wheathampstead	101	98

*The current public area of the public library at Buntingford Library is 112m². There is also a meeting room at the rear of the Library, but this is not fully accessible as access is up a steep ramp.
**Sawbridgeworth Library is currently delivered over two floors, with access to the 1st floor by a flight

stairs, which is not idea from an accessibility perspective.

4.4 Building and site floor plans for the integrated fire station / libraries are available on request.

4.5 Transport Statements are being provided for all four sites; at this stage the feasibility exercise suggests that the sites can be made safe for the dual use by Fire Services and the general public. The requirements for Transport Statements are rigorous to ensure that the vehicle and pedestrian impact of the development proposal both on the subject site and the wider locality are fully covered. Work Summary for the Transport Statements using Redbourn and Buntingford as examples are available on request.

5. Financial Feasibility

5.1 The consolidation from eight properties to four will yield significant revenue savings of £98,000 per annum, even after set off for the additional running costs at the integrated sites:

- exiting poor condition properties in favour of new extensions built to concurrent Building Standards,
- prevent the need for major repair and ongoing costs at the current library sites,
- avoids expenditure into buildings that are not suitable for future service provision,
- delivers energy consumption efficiencies through a reduction in HCC' footprint in the subject settlements.
- Saves fixed property overheads (Business Rates) saved,
- avoids lease costs (Wheathampstead).

5.2 HCC Capital Investment to provide Net Capital Funding of £186,902 will be required in order to deliver the integrated property solutions by Spring 2017. This Capital expenditure has already been secured as part of the *Inspiring Librarie*s Invest to Transform bid in 2014. This capital funding has been secured by the Library Service specifically to deliver projects that achieve revenue savings by 2017/18.

5.3 It will not be possible to complete disposals of the surplus library sites until Spring 2017. Valuation Advice forecasts capital receipts totalling £1,247,512 across three transactions.

5.4 The quantum of available S106 Funds may increase above the current level of £128,586 and is dependent upon the pace of residential development over the next 18 months.

5.5 The financial summary for the project is as follows:

Income	**£**
DCLG Grant	700,000
Section 106	128,586
Capital receipts	1,247,512
Total Income	**2,076,098**
Expenditure	
Project costs	2,263,000
Total Expenditure	**2,263,000**
Inspiring Libraries Invest to Transform Funding *	186,902
Revenue Expenditure Savings per annum from 2017/18	98,000

*Capital Funding secured to directly support Library Savings Targets of £2.5m by 2017/18

6. Community Engagement

6.1 To date the details of the projects' proposals around library and fire station co-locations have not been shared with local communities in any depth, awaiting the results of whether the project is feasible in the first instance from the services' perspective.

6.2 The award of the DCLG grant funding and the initiation of the project's feasibility process was documented within the *Inspiring Libraries Strategy - Implementation* paper that went to Customer Service, Performance and Libraries Cabinet Panel in March 2015.

This resulted in briefing a couple of groups that are directly affected by any future decisions on their local library.

6.3 The Redbourn Library Volunteers group, which have partnered with the Library Service to run Redbourn as a Community Library, are aware and positive about the proposals to move the library to the fire station.

6.4 At Wheathampstead the Parish Council has been kept informed of the proposals, as the library is currently delivered from the Parish Council's Memorial Hall. The Parish Council have provided positive initial feedback on the co-location plans.

6.5 In November 2015, the Buntingford in Transition Group presented a petition to Panel objecting to the plan to move Buntingford Library to the fire station site. However, this was before the plans for the new library had been

published and there was an assumption among the petitioners that the new facility would be reduced in size from the current library. The Buntingford in Transition Group have since presented the County Council with an alternative proposal for the redevelopment of the current library building.

6.6 Now that it is clear that the project is feasible, able to deliver the services' requirement and project outcomes, details of the proposals can be shared more widely with the four local communities.

The formal consultation at all four sites will be part of the Planning Application process and fundamental to the next steps in the project.

7. Equalities Implication

7.1 When considering proposals placed before Members it is important that they are fully aware of, and have themselves rigorously considered the equality implications of the decision that they are making.

7.2 Rigorous consideration will ensure proper appreciation of any potential impact of that decision on the County Council's statutory obligations under the Public Sector Equality Duty. As a minimum this requires decision makers to read and carefully consider the content of any Equalities Impact Assessment (EqIA) produced by officers.

7.3 The Equality Act 2010 requires the County Council, when exercising its functions, to have due regard to the need to (a) eliminate discrimination, harassment, victimisation and other conduct prohibited under the Act; (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it and (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it. The protected characteristics under the Equality Act 2010 are age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion and belief; sex and sexual orientation.

An Equalities Impact Assessment for each site will be developed as part of the next stage of the project. This document will indicates possible areas of differential impact on groups with protected characteristics, and measures taken to mitigate this.

8. Next Steps

8.1 Public Health, Localism and Libraries Cabinet Panel will be asked to make the following recommendations to Cabinet:

That Public Health, Localism and Libraries Cabinet Panel recommends to Cabinet that the project proceeds to co-locate the libraries at Redbourn, Sawbridgeworth and Wheathampstead with the relevant retained fire station.

In relation to the project at Buntingford, that Cabinet Panel recommends to Cabinet that the Library Service consider '*Buntingford in Transition's'* submission to keep the library in its current site, prior to taking a decision.

That Hertfordshire Fire and Rescue and the Library service share with the local Buntingford community the details of the proposal to locate the library with the retained fire station. Exhibiting the co-location proposals alongside *Buntingford in Transition's* plans.

To return to Public Health, Localism and Libraries Cabinet Panel in the Summer with the final recommendation on re providing or relocating Buntingford Library.

8.2 The next steps for the project if members agree are:

- Formal consultation at Redbourn, Sawbridgeworth and Wheathampstead sites as part of the Planning Application process.
- Liaising with local partners to share the details of the schemes.
- Transport Statements developed further for all four sites.
- Develop the internal layouts for the co-locations and particularly the library fit out.
- Consider *Buntingford in Transition's* alternative plan for the redevelopment of the current library building.
- Engage with the local Buntingford community to share the proposals to co-locate the Library and Fire Station.

This paper will be also be presented Resources & Performance Cabinet Panel for their information and comment.

9. Conclusions

9.1 The feasibility work has shown that the opportunity to co-locate four libraries with retained Fire Stations at Buntingford, Redbourn, Sawbridgeworth and Wheathampstead, is feasible in terms of meeting the services' requirements and project objectives.

9.2 To date the details of the projects' proposals around library and fire station co-locations have not been shared with local communities in any depth. This is the next stage of the project now it is clear that the co-locations are feasible.

9.3 Buntingford in Transition have objected to potential of Buntingford Library moving from the High Street and they have submitted their own proposal to improve the Library in its current location. The County Council needs time to consider Buntingford in Transition's proposal, as well as share with the local community the details of the opportunity to enhance library facilities in Buntingford through co-locating the library with the fire station.

Agenda Item No.

6

HERTFORDSHIRE COUNTY COUNCIL

COMMUNITY SAFETY & WASTE MANAGEMENT CABINET PANEL

FRIDAY 4 MARCH 2016 AT 10:00 AM

COMMUNITY PROTECTION DIRECTORATE QUARTER 3 2015/16 PERFORMANCE UPDATE

Report of the Director Community Protection (Chief Fire Officer)

Author: Darryl Keen, Deputy Chief Fire Officer (Tel: 57502), Steve Tant, Area Commander (Tel: 57530)

Executive Member/s: Richard Thake, Community Safety & Waste Management

1. Purpose of report

1.1 To provide the Cabinet Panel with an overview of Community Protection Directorate performance to the end of Q3 2015/16.

Please note that a more detailed report will be published at 2015/2016 year end and that this overview only contains the 'confirmed' performance information available at the time of writing, which is primarily Fire and Rescue performance data.

2. Summary

2.1 In the year to the end of Q3 the Service has experienced improvements in the following performance indicators:

- Deaths and injuries from primary fires
- Number of road traffic collisions attended
- Attendance standards (First and Second Pump to a property fire)

2.2 'Secondary fires' performance is worse than that seen over the same period last year; however targets have still been achieved.

2.3 Areas where performance has not met target are:

- Number of primary fires attended
- Number of deliberate fires (arson) attended
- Number of false alarms due to automatic fire alarms (AFAs) attended
- Third Pump attendance to a property fire

2.4 It should be noted that generally the number of calls to Fire and Rescue has been on a downward trend for a number of years. The

continuation of this trend may become increasingly difficult to maintain in the future.

3. Recommendation/s

3.1 That the Cabinet Panel notes the performance summary for the Community Protection Directorate in the year to the end of Q3 2015/16 and note that the full end of year report will be published for the next appropriate Cabinet Panel meeting after April 2016.

4. Background

Primary Fire Deaths

4.1 There have been **4** deaths in the year to the end of Q3 where the cause of death has been attributed directly to fire but these have not yet been confirmed by the coroner. It is believed that two of the victims, from a house fire in Potters Bar in July and a house fire in Hitchin in October were overcome by gas, smoke or fumes. It is believed that the deaths of two men in October, following a fire in an industrial unit in Hoddesdon, resulted from burns sustained during the fire. For the same period last year **5** fire fatalities were recorded.

Primary Fire Injuries

4.2 The definition of 'Primary Fire Injury' is an injury that was fire related where the victim was conveyed to hospital as a result. The figures do not include first aid or precautionary checks given at the scene.

4.3 In Q3 there were **17** injuries recorded from **13** primary fires. This is **12 more** than Q2 (which was exceptionally low), and **3 more** than the target of no more than **14** injuries for the quarter. In the year to the end of Q3 2015-16 there were **35** injuries resulting from primary fires. This is **1 less** than the same period last year and **7 below** the target of no more than **42**.

Road Traffic Collisions

4.4 The Fire and Rescue Service continue to be called out to rescue significantly more people from Road Traffic Collisions (RTCs) than from fires. Around ten times more people are killed on Hertfordshire's roads than in fires. The number of RTCs attended by the Service **decreased** by **22** (**15.5%)** from **142** in Q3 2014-15 to **120**.

4.5 Year to date figures show a **decrease** of **44** (**11.7%)** compared to the same period last year **falling** from **377** at the end of Q3 2014-15 to **333.**

Attendance Standards (First and Second Pump to Property Fires)

4.6 For the 12 months to the end of Q3 2015-16:-

The first appliance to a property fire **met** the attendance standard on **90.3%** of all occasions over the previous 12 months. This is **1.3** percentage points **better** than at the end of Q2 which was recorded as **89%.** The target of **90%** was met.

4.7 The second appliance to a property fire met the attendance standard on **90.9%** of all occasions over the previous 12 months. This is an **increase** of **1.9** percentage points from the end of Q2 which was recorded at **89%.** The target of **90%** was met.

Secondary Fires

4.8 The number of secondary fires attended (a fire of no discernible value or ownership i.e. scrubland, grassland, rubbish etc) **increased** by **4** (**2.2%)** fires from **185** in Q3 2014-15 to **189.** This is **18 (10.5%) above** the target of no more than **171** secondary fires for the quarter.

4.9 Year to date performance has also seen an **increase** in secondary fires **rising** by **50** (**5.9%)** fires from **853** in the year to the end of Q3 2014-15 to **903**. Yet, the target of no more than **904** secondary fires in the year to date has been achieved

Primary Fires

4.10 The number of primary fires (a fire which involves property e.g. buildings, crops, equipment etc) attended **rose** by **18 (5.8%)**, increasing from **308** in Q3 2014-15 to **326.** This is **21** (**6.9%)** fires **above** the target.

4.11 Year to date performance shows a **small increase** of **12 (1.2%)** fires from **985** in Q3 2014-15 to **997.** The target of no more than **981** fires was **not achieved**. It is positive to note that dwelling and vehicle fires have reduced by **5.2%** and **4.9%** respectively when compared to the same period last year. The Service has experienced a corresponding fall in the number of deaths and injuries resulting from primary fires.

4.12 The Fire and Rescue Service as well as the wider Community Protection Directorate continue to focus on our own prevention activities and in supporting work staged across HCC Directorates to improve community safety.

Deliberate fires (arson)

4.13 Deliberate fires have **risen** by **0.34** fires per 10,000 of the population from **1.63** fires in Q3 2014-15 to **1.97**. The target of no more than **1.57** for the quarter was **not achieved**. In the year to the end Q3 2015-16 the Service experienced a **rise** in the number of deliberate fires per 10,000 of the population of **0.99**, **up** from **6.73** fires at the end of Q3 2014-15 to **7.72** fires. The year to date target of no more than **7.45** fires was **not achieved**.

False alarms due to automatic fire alarms (AFAs)

4.14 In April 2014 Hertfordshire Fire and Rescue Service changed the way we responded to automatic fire alarms (AFAs) at business premises. During 2014-15 this policy was extremely successful, with the number of attendances to AFAs, *which were false alarms*, **reducing** by **14.5%.**

The number of false alarms attended, caused by AFAs, **increased** by **2.8%** (**17)** from **605** in Q3 2014-15 to **622**. The target of no more than **593** AFAs attended was **not met**. In the year to the end of Q3 2015-16 there has been an **increase** of **6.0%** from **1,799** in Q3 2014-15 to **1,907**. The number of AFAs attended at domestic premises has **risen** by **3.5%**. Whilst the number of AFAs attended at non-domestic premises (the focus of the new policy) has also **risen** by **8.9%**.

4.15 Whilst the overall number of calls received has increased, due to robust call challenge procedures being applied more calls than ever are not receiving a service attendance, up from **679** in 2014-15 to **928** in 2015-16

Third Pump to Persons Reported fire attendance standard

4.16 Third appliance to a property fire **met** the attendance standard on **87.5%** of all occasions over the previous 12 months. This is a **decrease** of **3** percentage points from the end of Q2 which was recorded at **90.5%**.

4.17 In addition, whilst this is **2.5% below** the **90%** target, the actual number of incidents requiring a third pump attendance is low and therefore a small increase, in failure to meet attendance standards, has a disproportionate impact on the statistical outcomes.

HERTFORDSHIRE COUNTY COUNCIL

COMMUNITY SAFETY & WASTE MANAGEMENT CABINET PANEL

FRIDAY 4 MARCH 2016 AT 10.00AM

WASTE MANAGEMENT PERFORMANCE MONITOR

Agenda Item no

7

Report of the Chief Executive & Director of Environment

Author: Simon Aries, Assistant Director Transport, Waste & Environmental Management (Tel: 01992 555255)

Executive Member: Richard Thake, Community Safety & Waste Management

1. Purpose of report

1.1 To allow the Panel to review the performance of Waste Management for the third quarter of this year (October – December 2015) against the Environment Department Service Plan 2015-2016 including key performance indicators, major projects, contracts and identified risks.

2. Service Performance Summary

2.1 Waste Management

The Waste Management Unit provides three separate quarterly monitoring reports to update on the service specific Household Waste Recycling Centre (HWRC) contract, the high profile Residual Waste Treatment Programme (RWTP) and an overall assessment of the statutory Waste Disposal Authority function of the Authority in the form of three performance indicators.

2.2 The Cabinet Panel also receives the Hertfordshire Waste Partnership Annual Report.

3. Recommendation

3.1 The Cabinet Panel is invited to note the report and comment on the performance monitor for Quarter 3 of 2015-16.

4. Strategic Performance Indicators, Contracts and Projects

4.1 The Waste Management strategic performance indicators, contracts and projects are listed below along with their data for Quarter 3 2015/16.

4.2 Hertfordshire Residual Waste Treatment Programme (RWTP)

RAG Status – Red

At this stage in the programme a number of risks have been reduced due to the control measures in place, however overall the status remains as red due to the high profile nature and high value of the programme.

Veolia Environmental Services (VES) successfully challenged the decision to reject planning permission for New Barnfield; the application was referred back to the Secretary of State for re-determination. A letter was issued on 16 July 2015 informing the Authority that the Secretary of State had again turned down the planning application. There were no challenges lodged to the re-determination decision effectively meaning that the proposed New Barnfield solution will now not proceed.

A draft Revised Project Plan (RPP) was submitted by VES on 7 July 2015 with the outcome of discussions and evaluation the subject of a separate report to this Panel. Interim residual waste disposal arrangements are in place until 2018 with the opportunity to extend until 2021.

Key Achievements and Progress in Qtr 3 (October – December 2015)

- Further analysis of the draft RPP including additional technical and financial information provided by VES.
- Continuing meetings and negotiations with VES regarding their draft RPP submission.
- Ongoing meetings with external advisors for the evaluation of the submitted draft RPP.
- Evaluation of the responses from the market consultation exercise and discussions with potential service providers.
- A report providing an update on the programme was taken to the Community Safety and Waste Management Panel in October.
- The contract with VES was varied in December 2015 to extend the time that the Authority has to inform VES of acceptance or rejection of the RPP until 31 March 2016.
- A Screening Opinion response has been received for the former Ware landfill site indicating that a full Environmental Impact Assessment should be undertaken before developing the site. The site has been identified for the potential development of an Eastern Transfer Station.
- Following a site search in the north of the county to identify potential sites for the development of a Northern Transfer Station, procurement of a consultant has been undertaken to carry out a highways assessment and a feasibility study.

Key Issues, Risks & Risk Mitigations:

- There is a separate report on the Agenda dealing with the RPP which covers its suitability economically, technically and in procurement terms. Any risks in this

regard are mitigated by the Interim Contracts which are in place until 2018, with possible extension to 2021, and the option to terminate the contract with VES.

- In addition to the risks and mitigations above, officers continue to explore options and alternatives beyond the contract with VES to inform decision making should the VES RPP be rejected by the Authority.

4.3 Waste Disposal Authority function (excluding RWTP) indicators

To ensure a compliant, high performing, economical and environmentally sound suite of waste disposal arrangements for Hertfordshire the Authority uses the performance indicators shown in sections 4.4 – 4.6 below.

This quarterly update provides an overview of the key factors influencing the three **annual** performance indicators for the Authority in its role as Waste Disposal Authority (as set out below) and also highlights other key areas and matters related to the function of the Waste Disposal Authority.

The performance indicators are reported annually. The final outcome for 2015/16 will be presented in the October 2016 update once all data has been collated and confirmed.

All the Waste Disposal Authority performance indicators have shown improvement in the 2014/15 outturn compared with the previous year as can be seen as follows:

4.4 Total household waste per household in kilograms (**the lower the better**)

As previously reported the total amount of household waste per household in 2014/15 was 1,046 kg which represents an improvement on the figure of 1,062 kg in 2013/14.

In December 2015 DEFRA released final figures for 2014/15. Although the figure produced is not directly comparable to this indicator, they show that total **residual** waste per household in kilograms for Hertfordshire was 534kg which is comparable to the eastern region figure of 531kg and better than the England average of 558kg. The top performing Waste Disposal Authority is Oxfordshire (412kg) as a result of the separate collection of food waste and effective restrictions on residual waste capacity at the kerbside in the administrative area.

In 2015/16 it is expected that this indicator will improve further as a result of the full year effect of kerbside changes in Dacorum and Three Rivers, and new service changes introduced by Broxbourne (reduced residual waste capacity).

This indicator is considered as a Green RAG rating.

4.5 Based on NI 192 – Percentage of Household Waste Recycled, Composted or Re-used (**the higher the better**)

The percentage of household waste recycled, composted or reused improved in 2014/15 to 49.8%, an increase on the 2013/14 total of 49.1%. This is comparable

to the regional figure of 49.3% and above the England average of 43.7%. The range for Waste Disposal Authorities varies from 23.3% to the top performing Waste Disposal Authority (Oxfordshire County Council) at 60.5%. Hertfordshire was ranked 13 out of the 32 Waste Disposal Authorities.

As noted above this performance indicator is expected to improve in 2015/16 as a result of Dacorum and Three Rivers' full year service changes, and Broxbourne's service change in October 2015.

This indicator is considered as a Green RAG rating.

4.6 Based on NI 193: % of Local authority collected waste landfilled (**the lower the better**)

The proportion of Local Authority Collected Waste (LACW) landfilled in 2014/15 was 25%, a significant decrease (positive direction) on the 2013/14 total of 34.3%. This reflects the new suite of interim disposal contracts which focuses more on Energy from Waste (EFW) as opposed to landfill. This is expected to improve further in 2015/16 now that the new Greatmoor EFW facility (in Buckinghamshire) has entered commissioning.

As a comparison, in the Eastern region 34.8% of LACW was landfilled. This figure is considerably lower in the North East of England (8.8%) which is reflective of greater provision of non-landfill options (e.g. Energy from Waste) and is suggestive of under capacity in Eastern England for non-landfill facilities.

The indicator is considered as a Green RAG rating.

Key Achievements and Progress in Qtr 3 (October to December 2015)

- The tender for a new clinical waste disposal contract went 'live' in December. The expectation is for evaluation and award of the contract in January 2016 with a commencement date of April 2016.
- Site searches have been commissioned (to commence in early 2016) to identify potential new sites for Household Waste Recycling Centres in the Bishops Stortford and Welwyn / Hatfield areas. .
- Work has commenced on the review of the Draft Municipal Waste Spatial Strategy to refresh the Waste Disposal Authority requirements up to 2031.

Key Issues, Risks & Risk Mitigations:

- Commodity market prices for recycled materials remain low and are on a downward trend which has impacted on the 2015/16 budget. This is primarily the result of low oil prices and reduced demand from key importers such as China.
- Monitor the construction of the FCC operated Greatmoor Energy Recovery Facility in Buckinghamshire. The facility is now in the commissioning stage and is expected to take deliveries of Hertfordshire's waste in January 2016. This is expected to contribute to economic and performance improvements in 2015/16.
- Monitor proposals for potential European and national recycling targets which may impact at a local level, including proposals for a 65% recycling rate announced in December 2015 by the European Commission.

4.7 Hertfordshire Household Waste Recycling Centre (HWRC) Service

HCC has a statutory obligation as a Waste Disposal Authority under the Environmental Protection Act 1990 to provide a HWRC service. AmeyCespa Ltd (Amey) took over the running of the 17 HWRCs in Hertfordshire on 6 October 2014.

Key Achievements and Progress in Qtr 3 (October – December 2015)

- In response to difficulties accessing the Letchworth HWRC, officers have worked closely with Amey to scope and deliver an improved site layout and enhanced site signage.
- A new approach has been agreed with Amey for the processing of wood waste brought to sites. This will significantly improve the proportion of this material that is recycled (rather than energy recovery through biomass facilities) which will improve recorded performance.
- The van permitting scheme has now received in excess of 19,000 applications.
- Since the roll out of the reuse centres at all sites (except for the Buntingford HWRC) Amey in partnership with HCC and with support from WRAP, are looking into ways of improving reuse options and opportunities, including consideration of further local third sector involvement.
- A robust contractual framework continues to drive improvements. Key Performance Indicators and Performance By Results tools are being used in relation to the contractual financial payments, which penalises Amey where they haven't performed.
- A commercial waste facility is operational at Amey's St Albans depotalthough use of this facility by traders has been fairly limited.
- Amey have appointed a new Contracts Manager, who will take up their post on 25 January 2016 and have implemented a new contract management structure to help address some of the outstanding issues.

Key Issues, Risks & Risk Mitigations:

- Peaks in service demand for the centres have always generated complaints regarding queues and capacity issues at the sites. Although not clearly evidenced, the reduction in days and hours may have added to the pressure on the network and certain facilities have experienced some significant issues, where queues have blocked local roads and sites have closed early due to lack of container space. Although these issues have reduced throughout the Summer and Autumn, as the sites have become quieter.
- To mitigate the above issues, all operational procedures relating to the HWRC network are being closely reviewed and monitored in partnership with Amey to ensure they are as efficient and effective as possible.
- Amey carried out a behaviour and user survey and traffic counters exercise at a small number of key sites to inform a communications plan that has been implemented to encourage residents to improve their recycling habits in order to reduce the frequency of visits and to maximise use of their kerbside recycling

provision. Officers continue to work closely with the contractor to mitigate any negative impacts and implement improvements across the network.

- Amey are investigating further ways to improve the current van permitting system to ensure that the service remains accessible to residents, while still preventing abuse of the system.
- Mystery Shopper inspections are being conducted routinely to assess the level of customer satisfaction and also to identify any key issues. Officers are regularly visiting sites to highlight any areas of poor performance and drive improvement.
- A number of facilities have long been identified as not fit for purpose and as needing relocation or redevelopment. Officers continue to work with Hertfordshire Property colleagues to find alternative options and an assessment of the network was included in the report to Members at the October Community Safety & Waste Management Panel.
- In addition to the risks and mitigations above, a refreshed Action Plan has been developed to identify key failings on the contract to date and officers continue to monitor Amey's progress against this.

5. Risks

5.1 Waste Management has one strategic level risk relating to Residual Waste Treatment – Risk (ENV0104).

The overall risk score remains at 32 based on the control measures in place including the interim disposal arrangements and capped termination provisions in the contract (however the risk remains 'red' due to its high profile nature and value)

6. Financial Implications

6.1 There are no financial implications arising from this report.

7. Internal Audit

7.1 There were no high priority recommendations by audit and no Internal Audit opinions were issued in this quarter with a 'limited assurance' or 'no assurance' level.

Background Information

None

HERTFORDSHIRE COUNTY COUNCIL

COMMUNITY SAFETY AND WASTE MANAGEMENT CABINET PANEL

FRIDAY 4 MARCH 2016 AT 10.00 AM

Agenda Item No.

8

PROPOSED MEDICAL RESPONSE IN ASSOCIATION WITH EAST OF ENGLAND AMBULANCE SERVICE

Report of the Director Community Protection (Chief Fire Officer)

Authors:- Darryl Keen, Deputy Chief Fire Officer (01992 507502), Andy Hopcraft, Area Commander – Response (01992 507540)

Executive Member:- Richard Thake, Community Safety and Waste Management

1. Purpose of report

1.1 This paper sets out the current regional and local position regarding the utilisation of fire and rescue service resources to respond to medical emergencies in order to deliver basic life support and defibrillation interventions to the public.

1.2 Hertfordshire Fire and Rescue Service is currently working under the umbrella of the Chief Fire Officers Association Eastern Region (CFOA ER), and in partnership with the East of England Ambulance Service (EEAS), to produce appropriate response protocols that form part of a regional strategy but also take account of local need.

2. Summary

2.1 Discussions are now well advanced between the six Eastern Region fire and rescue services that are co-terminus with the East of England Ambulance Service (EEAS) in order to establish a set of guiding principles for both First Responder and Co-responder schemes.

2.2 The regional guiding principles will be not be legally binding nor replace the need for individual fire and rescue services to facilitate their own partnership arrangements with the East of England Ambulance Service.

2.3 To facilitate both a regional and local approach, each FRS will provide a single point of contact to EEAS. Proposals also include the establishment of a governance board, with agreed Terms of Reference, and a regional working group to support the sharing of best practice and maintain regional consistency.

Definitions:

The Association of Ambulance Chief Executives (AACE) defines a co-responder as:

"a member of a professional body (e.g. police, fire, military, coastguard, mountain rescue) who responds to 999 calls on behalf of the ambulance service to a level specified by that trust."

Definition of First Responding:

For the purposes of this paper, First Responding is based on the Community First Responder scheme administered by the EEAS, where personnel respond to potential cardiac arrest patients with a limited amount of equipment, including a defibrillator. FRS could undertake this approach but could only seek to recoup additional costs, which would not normally include salary costs.

Definition of Co-responding:

For the purposes of this paper, Co-responding is considered to be where established emergency responders from a FRS act on behalf of the EEAS and attend all emergency medical calls within a specified geographical area. Since co-responders are able to provide a higher level of medical provision, and thus positively impact upon EEAS performance targets, FRS would, in agreement with EEAS, seek to recoup additional cost, including salary cost. It is envisaged that under a Co-responding agreement, periods of availability will be agreed in advance and shall be subject to regular monitoring.

Hertfordshire Proposals:

The high level trauma care skills of firefighters in Hertfordshire present a very positive opportunity to assist EEAS to meet their attendance times for certain incident types but without doubt the most significant benefit is for the public in terms of quicker medical interventions which, it is hoped, will have a positive impact on patient outcome. It is therefore proposed that a Hertfordshire Fire

and Rescue Service Partnership Agreement (PA) will be developed, aligned and in accordance with the Eastern regional governance board.

First steps will be to carry out a number of pilot First Responder schemes at identified sites across the County for a period of six months.

It is proposed that the first trials will be conducted at two whole-time fire stations (sites to be confirmed), these sites will be chosen following consultation with EEAS.

In addition, the Eastern regional Co-responding group has also begun work to identify mobilising arrangements to ensure resources are mobilising as quickly and effectively as possible. The proposed trial in Hertfordshire will support the regional work by providing a body of evidence to establish the feasibility of more permanent schemes in the future.

At this stage it is proposed that HFRS crews would only be responding to cardiac arrests and chest pain calls over the initial six month trial period.

When an appropriate location has been identified, EEAS will carry out a training needs analysis to ensure that HFRS staff are suitably skilled and equipped to attend medical incidents. Where gaps are identified these will be facilitated by HFRS, but delivered by EEAS.

3. Recommendation/s

3.1 The Cabinet Panel acknowledges the contents of the paper and;

i) endorses on the formation of a Partnership Agreement between Hertfordshire Fire and Rescue Service and East of England Ambulance Service.
ii) endorses a 6 month First Responder pilot scheme initially at two HFRS sites (to be identified).

4. Background

4.1 The development of both first responder and co-responder schemes over the course of the last ten years has seen a number of fire and rescue services entering into partnerships with their respective ambulance trusts.

4.2 To date, this has predominantly seen retained firefighters operating under a number of different arrangements to provide medical interventions in rural areas. These schemes have continued to develop but significantly, Greater Manchester Fire and Rescue Service, an

exclusively whole-time service, now responds to cardiac arrest incidents as a matter of course.

4.3 The recent move by the Executive Council of the Fire Brigades Union to remove its long held objection to co-responding is also significant.

4.4 Blue light collaboration has gained real momentum and traction over the course of the last eighteen months since the joint statement of intent from AACE, CFOA and ACPO (now NPCC).

4.5 This commitment has been further strengthened through the work of the Emergency Services Collaboration Working Group (ESCWG), and in particular the joint working now taking place between AACE and CFOA (see appendix A).

5. Financial Implications

5.1 Cost recovery arrangements between HFRS and EEAS will be clearly defined prior to the commencement of the proposed trial and as a central pillar of the Partnership Agreement.

5.2 During the trial period and analysis phase, the expected call volume and associated costs are expected to be low but will be continually assessed. It is proposed that a reasonable level of cost be underwritten for the period of the trial and, due to the limited cost, it is expected that this can be absorbed within the Community Protection budget.

6. Equalities Implications

6.1 When considering proposals placed before Members it is important that they are fully aware of, and have themselves rigorously considered the equalities implications of the decision that they are taking.

6.2 Rigorous consideration will ensure that proper appreciation of any potential impact of that decision on the County Council's statutory obligations under the Public Sector Equality Duty. As a minimum this requires decision makers to read and carefully consider the content of any Equalities Impact Assessment (EqIA) produced by officers.

6.3 The Equality Act 2010 requires the Council when exercising its functions to have due regard to the need to (a) eliminate discrimination, harassment, victimisation and other conduct prohibited under the Act; (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it and (c) foster good relations between persons who share a relevant

protected characteristic and persons who do not share it. The protected characteristics under the Equality Act 2010 are age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion and belief, sex and sexual orientation.

6.4 As with all emergency response arrangements, it is not expected that the proposal would create any equalities impacts.

6.5 An initial impact assessment has been undertaken and revealed that there are no direct equality issues arising from this report. The Equalities Impact Analysis will remain under review throughout the trial and will be used to inform development of any expansion of the project. There are no equalities implications for any persons with protected characteristics.

Agenda Item No.

9

HERTFORDSHIRE COUNTY COUNCIL

COMMUNITY SAFETY & WASTE MANAGEMENT CABINET PANEL

FRIDAY 4 MARCH 2016 AT 10:00

ALTERNATIVE FINANCIAL MODEL (AFM) FUNDING REVIEW

Report of the Chief Executive & Director of Environment

Author: James Holt, Waste Manager - Contract Development
Tel: 01992 556318

Executive Member: Richard Thake, Community Safety & Waste Management

1. Purpose of report

1.1. To make the Cabinet Panel aware of the consultation submitted to the Hertfordshire Waste Partnership (HWP) on proposals to reduce the base position 'pot' to assist the County Council in meeting its substantial savings targets and guarantee an unchanged Alternative Financial Model (AFM) mechanism for a period of four years.

1.2. The report which was presented to the HWP Member Group meeting on 25 January 2016 is attached at Appendix 1.

2. Background

2.1. The AFM was first established in 2008 to reward Waste Collection Authorities (WCAs) for reductions in residual waste levels in order to meet targets. The model has since evolved to incentivise WCAs to make improvements at the kerbside which reflect actual savings to the County Council as the Waste Disposal Authority (WDA) in the payment of disposal services for residual, organic and recycled waste.

2.2. The AFM has been successful in incentivising WCAs to make service changes which have resulted in reduced disposal costs for the WDA. However, 90 per cent of the savings made are paid back to the WCAs as their reward, therefore not realising significant savings for the County Council.

2.3. The County Council is keen to retain the AFM at the moment as it continues to incentivise WCAs to make savings which are in the best interests for the overall council tax payer. In addition, should waste start to increase, which is the case with five of the ten WCAs that have not made recent service changes, the WDA is insulated from increased costs (up to the value of the AFM and excluding Household Waste Recycling Centres) as where WCA disposal costs increase the AFM payment reduces, resulting in a cost neutral position for the WDA.

2.4. However, recognising the increased pressure on the public purse and the large savings targets the County Council has to achieve a proposal has been put to the HWP to reduce the payments made through the AFM by £334,000 in 2017/18 and a further £333,000 in 2018/19 and 2019/20 (£1 million in total over three years starting from 2017/18) with a guarantee not to change the mechanism during the same period.

3. Recommendation

The Cabinet Panel is asked to note the contents of the report.

4. Consultation process

4.1. The consultation process and report was presented to the HWP Members group on 25 January 2016. Following some brief discussion it was agreed to extend the deadline for the return of comments to Monday 4 April 2016.

4.2. Responses received will be summarised and reported back to the HWP Member meeting on 25 April 2016 with the aim being to also propose a way forward although this may require further engagement with this Panel depending on the feedback received from the WCAs.

5. Financial implications

5.1. Subject to the outcome of the consultation process it is proposed to reduce AFM payments by £334,000 in 2017/18 and a further £333,000 in 2018/19 and 2019/20, totalling £1 million towards the County Council's significant savings targets.

APPENDIX 1

HERTFORDSHIRE WASTE PARTNERSHIP

MEMBERS' GROUP
25th January 2016

Item 7 – Alternative Financial Model (AFM) funding review

Author: Simon Aries and James Holt

1 Purpose of Report

1.1 To consult on proposals to guarantee an unchanged AFM mechanism for a period of four years whilst reducing the base position 'pot' to assist the County Council in meeting its substantial savings targets.

1.2 To highlight significant projected improvements to AFM payments as a result of recent and proposed service changes.

2 Background

2.1 The County Council has made significant efforts in delivering more financially efficient services in recent years. Whilst it is appreciated that all partner authorities face similar challenges, the Waste Disposal Authority (WDA) is, like all other County Council services, obliged to consider how further financial savings may be delivered.

2.2 The AFM is a non-statutory inter-authority payment of significant size and its continual application and evolution in recent years is reflective of a strong commitment on behalf of the County Council to delivering the aims and objectives of the Hertfordshire Waste Partnership (HWP).

2.3 The AFM was established in 2008 to reward Waste Collection Authorities (WCA) for reductions in residual waste levels in order to meet targets. The model has since evolved to directly reward WCAs

that make improvements to kerbside services which translate into actual net savings to the County Council, as the WDA, in the payment of disposal services for residual, organic and recycled waste.

2.4 The AFM works in two parts; (i) a Base Position for each WCA is calculated determined on size of authority and their relative average cost to the WDA and (ii) the 'In Year Performance' which calculates the actual savings or costs generated by each WCA in comparison to the previous year.

2.5 The AFM 'pot' is the total amount paid out by the WDA at the end of each financial year and is the starting point for the following year's Base Position.

2.6 The current AFM was approved in January 2013 and was subsequently reviewed in 2014 to ensure the model was working as intended. This resulted in a phased two year realignment of the baseline 'pot' to ensure the rewards generated through the model reflected actual savings in waste disposal made by the WCAs since it conception in 2008/09.

3 Projected future payments

3.1 Tables 1 and 2 show the actual and projected 'pot' for the new model and the payments to individual WCAs respectively. Is should be noted that all figures in this report are based on projections / assumptions detailed in appendix 1, are subject to change, and are provided for illustrative purposes only.

Table 1: AFM pots for the last three years

	AFM pot total
2013/14	£3,018,615
2014/15	£2,801,766
2015/16 **(Projected)**	£3,039,090

Table 2: Payments made to each WCA

	2013/14	**2014/15**	**2015/16 (Projected)**
Broxbourne	£237,765	£160,616	£241,478
Dacorum	£340,104	£385,198	£657,656
East Herts	£327,338	£276,230	£256,717
Hertsmere	£241,886	£201,716	£182,829
North Herts	£605,674	£469,564	£284,796
St Albans	£479,362	£473,042	£449,849
Stevenage	£218,297	£97,381	£186,425
Three Rivers	£157,103	£238,783	£270,438
Watford	£187,363	£223,963	£173,492
Welwyn	£223,723	£275,272	£355,411

Hatfield			
Total Pot	**£3,018,615**	**£2,801,766**	**£3,039,090**

3.2 It is interesting to note that overall collected waste is projected to increase in 2015/16 compared to the previous year but despite this AFM payments are expected to increase. This reflects changes in collection services and disposal routes for food waste and street sweepings which significantly reduces disposal costs and directly awards those WCAs introducing changes.

3.3 Table 3 highlights the current projection for 2016/17 through to 2019/20, taking into account the assumptions in appendix 1. As in recent years, if WCAs make service changes that provide savings in disposal, the size of the pot will increase:

Table 3: Projected payments made to each WCA

	2016/17 (Projected)	**2017/18 (Projected)**	**2018/19 (Projected)**	**2019/20 (Projected)**
Broxbourne	£338,620	£342,742	£325,637	£318,841
Dacorum	£594,850	£542,869	£497,365	£534,820
East Herts	£369,540	£417,142	£451,719	£466,207
Hertsmere	£253,101	£277,406	£297,196	£302,754
North Herts	£373,058	£429,559	£479,185	£484,587
St Albans	£596,710	£622,381	£591,713	£544,793
Stevenage	£215,793	£257,386	£262,505	£278,286
Three Rivers	£384,665	£328,256	£328,549	£324,339
Watford	£229,467	£275,670	£306,790	£325,657
Welwyn Hatfield	£427,937	£389,316	£380,380	£377,382
Total Pot	**£3,783,740**	**£3,882,727**	**£3,921,039**	**£3,957,667**

4 Proposal

4.1 It is proposed to reduce the base position 'pot' by £1 million over the next four years starting in 2017/18 as shown below:

	2016/17	**2017/18**	**2018/19**	**2019/20**
Reduction	£0	£334,000	£333,000	£333,000

4.2 It is planned to combine this with giving surety over the continued application of the AFM model for a period of four years, with a scheduled review to commence in 2018.

4.3 Not only will this provide assurance for the next four years (subject to in year waste growth / reductions) the model will continue to work by rewarding each authority for its in year performance i.e. each WCA will

still be directly rewarded for making positive service changes. As the projections in table 3 show service improvements will significantly reward those making the changes.

4.4 This change has been timed to correspond with the significant additional value that is projected to be added to the 'pot' in the form of the new street sweepings recycling contract and recent / planned service changes made by a number of WCAs. As a result the proposed reductions should have a lower impact on WCA budgets.

4.5 The potential impact of these changes are shown in Table 4:

Table 4: Projected payments made to each WCA including reduction from 2017/18

	2015/16 (Projected)	2016/17 (Projected)	2017/18 (Projected inc. £334k reduction)	2018/19 (Projected inc. £333k reduction)	2019/20 (Projected inc. £333k reduction)
Broxbourne	£241,478	£338,620	£316,009	£272,360	£239,240
Dacorum	£657,656	£594,850	£496,959	£405,839	£397,726
East Herts	£256,717	£369,540	£377,158	£372,026	£346,747
Hertsmere	£182,829	£253,101	£251,469	£245,521	£225,556
North Herts	£284,796	£373,058	£388,273	£396,863	£360,760
St Albans	£449,849	£596,710	£578,685	£503,373	£411,526
Stevenage	£186,425	£215,793	£233,709	£215,327	£207,921
Three Rivers	£270,438	£384,665	£300,703	£273,605	£241,699
Watford	£173,492	£229,467	£248,053	£251,744	£243,535
Welwyn Hatfield	£335,411	£427,937	£357,710	£317,380	£282,957
Total Pot	**£3,039,090**	**£3,783,740**	**£3,548,727**	**£3,254,039**	**£2,957,667**
DIFFERENCE	**£0**	**£0**	**-£334,000**	**-£667,000**	**-£1,000,000**

5 HWP consultation

5.1 In line with the Hertfordshire Waste Partnership Agreement (HWPA) the WDA is seeking feedback on these proposals.

5.2 Clarifications or questions related to this report and proposal will be addressed with any responses provided to all WCAs to ensure a common understanding and provide transparency (unless a specific confidential request is received).

5.3 Comments on the proposal are sought by Friday 4th March 2016 and should be sent by email to Simon Aries (simon.aries@hertfordshire.gov.uk).

5.4 The aim is for a paper to be presented to HWP Member Group in April 2016 setting out the County Council's response to the consultation.

Appendix 1

All projections in this report are based on a number of assumptions as set out below:

- Does not include any increase in tonnage as a result of population growth.
- Assumes all disposal rates stay the same.
- Projects full year impact of service changes introduced by Dacorum Borough Council and Three Rivers District Council during 2014/15 – separate food waste and commingled dry recycling collections.
- Projects changes made by Broxbourne Borough Council from October 2015 – Reduced residual waste capacity through small wheeled bins and fortnightly collections, associated increase in dry recycling and cardboard diverted from the organic waste stream into the dry recycling scheme.
- Projects impact of new street sweeping recycling contract from April 2016.
- Projects potential services changes by St Albans City and District Council from June 2016 – Introduction of separate food waste collections with recycling collections remaining the same.
- Projects potential introduction of green waste changing by Three Rivers District Council resulting in a 20% reduction in green waste collected.
- Incorporates reduced gate fees from April 2018 as the Envar IVC contract ends and St Albans and Watford are redirected to alternative disposal sites.

HERTFORDSHIRE COUNTY COUNCIL

COMMUNITY SAFETY AND WASTE MANAGEMENT CABINET PANEL

FRIDAY 4 MARCH 2016 at 10:00 am

Agenda Item No.

10

FUTURE DIRECTION OF THE RESIDUAL WASTE TREATMENT PROGRAMME

Report of the Chief Executive & Director of Environment

Executive Member: Richard Thake – Community Safety & Waste Management

Local Members: Tim Hutchings (Hoddesdon North)
Alan Searing (Hoddesdon South)

Authors: Simon Aries, Assistant Director – Transport, Waste & Environmental Management
Matt King, Head of Waste Management
Jo Hawes, Senior Waste Management Project Officer

1. Purpose of the report

1.1 To provide Members with information concerning the Revised Project Plan ("RPP") submitted by Veolia ES Hertfordshire Limited ("VES") in accordance with the Residual Waste Treatment Contract ("the Contract") entered into between VES and Hertfordshire County Council ("the Council") on 27 July 2011 for the long term treatment of Hertfordshire's residual Local Authority Collected Waste ("LACW")

1.2 To explain the RPP, the contractual context, its suitability to meet the Council's needs, its acceptability in commercial, affordability and deliverability terms and to provide a comparative assessment between the RPP and credible alternative options available to the Council for the treatment of residual LACW in Hertfordshire.

1.3 To enable the Panel to make a recommendation to Cabinet for consideration at its meeting on 14 March 2016.

2. Summary

2.1 Following a procurement process using the competitive dialogue procedure pursuant to the Public Contracts Regulations 2006 (as amended), the Council awarded the Contract to VES in July 2011 on the basis that VES had submitted the most economically advantageous tender. The Contract required VES to obtain planning permission for a proposed energy from waste facility ("EfW") at south Hatfield. The Contract also provides that if a "satisfactory" planning

permission was not obtained by the agreed Planning Permission Longstop Date then the Council was entitled to either terminate the Contract or invite VES to propose a RPP. The RPP mechanism in the Contract allows VES to propose an alternative site and/or design and other consequential changes to the Contract. Following the failure of the New Barnfield proposal to obtain planning permission, in January 2015 the Council invited VES to submit a RPP and in July 2015 a RPP was submitted by VES in accordance with the Contract. The Council may now either accept the RPP or reject it.

2.2 If the Council accepts the RPP it will need to bring the RPP into effect by varying the Contract. If the Council rejects the RPP it will need to terminate the Contract and pay compensation to VES.

2.3 The RPP submitted by VES details their proposal to develop a high efficiency energy recovery facility ("the Facility"), based on modern incineration technology, and designed to meet R1 "recovery" status[1] under the Waste Framework Directive. The Facility would be Combined Heat & Power ("CHP") "ready" and with recovery/reprocessing of Incinerator Bottom Ash ("IBA") derived from the processing of residual waste streams.

2.4 The location of the proposed Facility is at Fieldes Lock, Rye House, Hoddesdon ("the Site"). The land is owned by Tarmac Aggregates Limited ("Tarmac") and discussions have been completed by VES to secure the site, that is, an Option for Lease has been signed (and is pending exchange on Council RPP acceptance) between Tarmac and VES. This element of the RPP has taken considerable time to secure and is the principal reason for the delay in publicly announcing elements of the draft RPP earlier in the process.

2.5 The proposed Facility would have a nominal capacity and the ability to accept 320k tonnes per annum of waste (based on normal calorific values and plant availability) and is expected to generate 33.5 Megawatt electric (MWe) gross of power (30.2MWe nett). This can be considered as the equivalent electricity input into the National Grid for 69,000[2] typical households. VES will remain obliged to accept the same level of waste (should it arise) prescribed by the Contract, 352k tonnes per annum, so the RPP maintains the current flexibility and resilience to manage residual waste growth.

2.6 As a result of physical constraints at the Site, the Facility will not include a front end materials recycling and recovering facility as was proposed as part of VES' New Barnfield solution.

[1] A performance indicator for the level of energy recovered from waste. Those that achieve R1 status can be classified as 'recovery' facilities rather than disposal facilities.

[2] According to OFGEM (2015) typical domestic electrical consumption is 3.5 MWh/home/year was, Rye House should generate 241,600 MWh per year= 69,000 households

2.7 The Contract Guaranteed Minimum Tonnage ("GMT") input commitment from the Council has been reduced from 180k to 135k tonnes per annum with payment banding structured into three bands, (i) 0 to 180k tonnes, (ii) 180,001 to the Council's revised waste flow projections submitted as part of the RPP process and (iii) up to the Contract maximum tonnage of 352k for the Facility to cater for waste growth above projected levels.

2.8 Should the Council decide to accept and effect the RPP through a Deed of Variation to the Contract and a planning permission is obtained in line with VES's expectations, the Planned Services Commencement Date for the Facility is estimated to be the 31 December 2020.

2.9 The proposed operational period of the Contract is 30 years ("Contract Period") following planning and construction for the Facility. The Contract would expire in 2050 ("Expiry Date").

2.10 Given the Site is owned by Tarmac and would be secured by VES on a long lease ("the Headlease"), on the Expiry Date of the Contract the Site and Facility would not be in the Council's control. At the end of the Contract Period, VES retain the Facility and would be able to continue to operate it for the final ten years of its planned life (40 year total) based on 100% non-contract waste. This allows a longer depreciation period for the Facility which is reflected in a lower unitary charge for the Council (the calculated gate fee per tonne in accordance with the payment mechanism in the Contract). This also means at the end of the Headlease term that VES rather than the Council is responsible for decommissioning the Facility and returning the Site to Tarmac as a "flat site".

2.11 To retain flexibility in relation to the Facility, an "option" has been negotiated to allow the Council to make a one-off capital investment 2 years prior to the end of the Contract Period to purchase the remaining term of the Headlease from VES. The Council would then be Tarmac's tenant rather than VES and could use the Facility for the remainder of the Headlease term of the Facility. The Council has no obligation to exercise this option.

2.12 Alongside consideration of the RPP, the Council has also considered other options available and has conducted a market consultation exercise to understand how the RPP compares to other potential alternatives. Further detail is contained in section 16 of the report below.

3. Recommendations

3.1 That the Community Safety and Waste Management Panel recommends that Cabinet:

3.1.1 Approves the acceptance in principle of the Revised Project Plan (RPP) submitted by Veolia ES (VES) Hertfordshire Limited subject to the satisfactory conclusion of the legal drafting required to vary the Residual Waste Treatment Contract (the Contract) and subject to satisfactory conclusion of the legal drafting of all associated ancillary documents required to give effect to the RPP.

3.1.2 Authorises the Assistant Director – Transport, Waste & Environmental Management to conclude the detailed discussions on the RPP with VES and discussion and drafting of the Contract variation and all associated ancillary documents in consultation with the Chief Legal Officer and the Chief Finance Officer (Section 151 Officer).

3.1.3 Subject to 3.1.1 and 3.1.2 above, authorises:

(a) the Chief Executive and Director of Environment in consultation with the Executive Member for Community and Waste Management to accept the RPP;

and

(b) the Council to enter into the relevant Contract variation agreement and to enter into any necessary documentation required to give effect to the RPP and to take all other steps and actions to protect the Council's interests.

3.2 Authorises the Assistant Director – Transport, Waste & Environmental Management in consultation with the Chief Legal Officer and the Chief Finance Officer (Section 151 Officer) to enter into a further deed of variation to the Contract to extend the deadline for acceptance of the RPP from 31 March 2016 to 30 June 2016 if this is considered necessary to enable the Contract variation agreement and other necessary documentation referred to in 3.1.2 to be concluded to the Council's satisfaction and/or to enable all other steps and actions to be taken to protect the Council's interests.

3.3 That the Chief Legal Officer (and in her absence either the Assistant Chief Legal Officer Environment, Property and Dispute Resolution or the Head of Commercial Law) be authorised to execute the Contract variation agreement and other necessary documentation referred to in 3.1.2 as are required to give effect to the above decisions, so far as such power is not already delegated by the County Council's Constitution.

4. Background

4.1 The Hertfordshire Waste Procurement Programme (now the RWTP) was initiated to assist the Council to undertake its statutory duties as the Waste Disposal Authority, to provide disposal facilities for all of the residual LACW in Hertfordshire, as collected by the county, district and borough councils. The RWTP has its roots in the Joint Municipal Waste Management Strategy 2007, as agreed by the Hertfordshire Waste Partnership (HWP), to seek a long term solution to meet residual LACW treatment and disposal needs.

4.2 A Contract Notice was placed in the Official Journal of the European Union (OJEU) by the Council on 9 April 2009. Thirteen (13) pre-qualification questionnaires were received with the six (6) top scoring companies and consortia invited to participate in the competitive dialogue process. Following the receipt and evaluation of the Outline Solutions, four (4) bidders were invited to submit Detailed Solutions.

4.3 Final tenders from the two (2) top scoring bidders (E.On Energy from Waste AG and Veolia ES Aurora Limited) were received in January 2011. Following the evaluation of the final tenders, a recommendation to name VES as preferred bidder was made by the Waste Management Cabinet Panel on 28 April 2011. The recommendation was approved by Cabinet on the same day.

4.4 On 27 July 2011 the Council and VES, a special purpose project company established by Veolia ES Aurora Limited for the RWTP entered into the Contract for the provision, by VES to the Council, of residual waste treatment services including the design, construction, financing and operation of a Recycling & Energy Recovery Facility ("RERF") at New Barnfield, Hatfield.

4.5 On 8 July 2014 the Secretary of State for the Department of Communities and Local Government ("SoS") refused to grant planning permission for the RERF at New Barnfield. VES successfully challenged this refusal in the High Court. The SoS re-determined the planning application and on 16 July 2015 issued a notice refusing the application.

4.6 The Contract with VES contains provisions allowing the Council, on planning failure, the option to request a RPP from VES to provide an alternative solution for Hertfordshire's residual LACW.

4.7 Following a recommendation from the Highways and Waste Management Cabinet Panel, and a decision by Cabinet in November 2014 in accordance with the mechanisms in the Contract, a Deed of Variation to the Contract was completed and a RPP was requested from VES on 7 January 2015, giving VES up to six months to present a draft proposal for evaluation. During this period

VES explored a number of options for the disposal of Hertfordshire's residual LACW and met regularly with officers to discuss progress and proposals.

4.8 A draft RPP was submitted by VES on 7 July 2015 and discussions over the content were held with the Council for a period of six months that led to the submission of a final draft RPP in late December 2015. In addition to consideration of the RPP from a deliverability and affordability perspective and discussion with VES over its commercial terms, the Council has also undertaken an evaluation of the RPP to assess how it compares to the New Barnfield solution and other solutions that were proposed in the original RWTP procurement. This work and analysis is now complete and is the subject of this report.

4.9 A detailed history of the programme can be found in the Highways and Waste Management Cabinet Panel report dated 4 November 2014 and the Community Safety and Waste Management Panel report dated 21 October 2015.

5. RPP Site

5.1 The RPP Site secured by VES is located off Ratty's Lane in Hoddesdon, Hertfordshire. The full address is: 2 Ratty's Lane, Hoddesdon, Hertfordshire, EN11 0RF. A plan showing the location of the Site is shown in *Figure 1*.

5.2 The Site is owned by Tarmac (previously Lafarge Aggregates Ltd) and is an existing industrial site with planning permission to operate an asphalt coating plant, an aggregates railhead and a ready-mixed concrete plant.

5.3 The floor space for the proposed facility would be approximately 7,950 square metres with a maximum height of 48 metres and with twin slimline emissions stacks not likely to exceed 100m in height.

5.4 The Site is not located in the Green Belt but it is not an allocated site for waste management within the adopted Hertfordshire Waste Local Plan and is safeguarded as a Rail Aggregate depot within the Hertfordshire Minerals Plan. Although the site is not an allocated site for waste management, policy within the Council's Waste Local Plan allows for sites that are not allocated to be developed for waste purposes providing that proposals can demonstrate that such a development is in compliance with the relevant policy requirements.

Figure 1: Location and boundary of the proposed EfW facility

5.5 The proposed Facility would also provide a waste education centre for use by the Council and its partners (e.g. school and community group visits). VES's outline RPP design is shown in *Figures 2 and 3* below.

5.6 Deliverability of the Facility in relation to the Site has been discussed at length during evaluation of the RPP. This report recognises that, should the Council wish to accept the RPP proposals and complete a further Deed of Variation to the Contract (in accordance with the mechanisms in the Contract), VES would be required to obtain a Satisfactory Planning Permission ("SPP") and other necessary consents for the RPP and this will be determined by the Council's Development Control Committee in response to a planning application from VES

Figure 2: Artists impression of the facility from the rail sidings

Figure 3: Artists impression from the tow path

5.7 The Contract as amended by the RPP Deed of Variation will require VES to use "all reasonable endeavours" to obtain a SPP for the proposed RPP Facility by the agreed Planning Permission Longstop Date ("PLSD") as detailed in the Part II annex to this report. If, by the PLSD, VES have not obtained a SPP the Council will be entitled to terminate the Contract as varied for planning failure. On termination for planning failure the Council will have to pay VES compensation on

termination at the capped sums described in Table 6.2 in Appendix 6 of this report.

5.8 The Contract as amended by the RPP Deed of Variation will also provide that if the waste planning authority refuses to grant a SPP or if any SPP is called-in neither party is obliged to incur expenditure on proceedings (unless the parties otherwise agree) and the Council would be entitled to terminate the Contract for planning failure (as in 5.7 above).

5.9 Whilst it is not necessarily appropriate for this report to conclude on planning deliverability matters, it is important that Members are aware of the key planning matters associated with delivering the Facility such as the local traffic impact. These matters are explored in greater detail as Appendix 1 to this report.

6. RPP technology

6.1 Like the New Barnfield solution, the RPP solution proposes the use of a two-line EfW Facility albeit with a significantly reduced overall nominal capacity than the New Barnfield solution (which was sized in total at 380k tonnes per annum with a 352k tonne per annum EfW solution post a mechanical pre-treatment process ("MPT") at the 'front-end').

6.2 The RPP proposed annual capacity of 320k tonnes per annum would generate 30.2 MWe (net, with no heat export). This is the equivalent of providing a comparable quantity of electricity into the National Grid as used by 69,000 households.

6.3 The RPP provides evidence of VES' and the proposed construction sub-contractor's good track record of providing this type of solution specifically, moving grate EfW technology would provide a robust and well proven solution for Hertfordshire.

6.4 The technology choice would achieve almost complete landfill diversion (c. 97% of all residual waste LACW received). The exception is the Flue Gas Treatment ("FGT") residues which are proposed to be sent to the Minosus underground storage facility (within a rock salt mine in Cheshire) for disposal. This operation attracts Landfill Tax and thus, in the officer's view, should not be considered as diversion.

6.5 Incinerator Bottom Ash ("IBA") would be removed from the Site by rail and processed off-site to provide useable aggregate substitute material. The planned removal of IBA (c. 20% of the nominal capacity or 67k tonnes in 2021/22) by rail from the Site prior to being processed into useable products is seen as

advantageous in mitigating potential impacts on the surrounding highways network. The rail sidings may further be utilised during the construction period and potentially for third party waste inputs to the Facility.

6.6 The proposed RPP Facility comprises a storage capacity in the waste bunker that satisfies the Council's requirements for projected delivery volumes and the flexibility of a two-line facility provides comfort as to the availability of the Facility to receive and process Hertfordshire's Contract waste.

6.7 A comprehensive contingency plan is outlined in the RPP allowing access to VES's other UK EfW facilities during planned maintenance periods (without any additional cost to the Council) thereby maintaining high landfill diversion rates for the Council.

6.8 The RPP solution would meet existing legislation with respect to air emission levels and allowances in the design have been made for implementing a system to meet more stringent emission limits should they be introduced at a future date.

6.9 Due to the size of the Site, VES's approach to the recovery of recyclables at the Facility does not include pre-treatment through MPT as was the case with the New Barnfield solution. Instead, an overband magnet would provide ferrous metal recovery from the IBA stream. This is common practice for similar facilities and has been taken into account in the financial assessment of the RPP.

6.10 The proposed Facility's power export is considered favourably by the Council's technical advisors, Ramboll. The lack of MPT has reduced the parasitic load (the amount of power the plant itself needs to operate) and the Facility would generate increased power output from a reduced tonnage in comparison to the New Barnfield solution.

6.11 Overall the proposal does not include heat recovery, apart from a very small amount that may be utilised for heating the visitor centre. The proposal includes steam extraction to enable heat utilisation at a future date as is common place with recently constructed facilities of this nature in the UK. VES would undertake a process of discussion with proximate third parties that could potentially require heat input from the Facility prior to any planning application. If secured this would also be dealt with by a "gain share" approach (see section 9.9).

6.12 The RPP proposes a change in the technology and construction sub-contractor to a joint venture between B&W Volund and the Lagan Construction Group. Ramboll consider that there is a strong track record of the individual contracting parties and sub-suppliers working together on comparable schemes and this adds assurance and confidence to the RPP.

6.13 When developing a solution for residual LACW treatment, one of the fundamental technical decisions is the selection of the most suitable technology. There are a range of technologies to consider and, more specifically in relation to thermal treatment options, there appears to be a choice between well proven advanced moving grate systems and the less proven alternative technologies. To determine if the Contractor's technology choice is suitable for the Council, it is important to look at a range of key criteria as the facility will be operated for many years, needing to provide a reliable and robust service. This is outlined further in Appendix 2 which also includes references in relation to emissions and public health issues.

6.14 In summary, the technology proposed for the Facility is a proven, reliable and flexible waste combustion recovery process and the RPP proposals have been designed to be compliant with the relevant legislative requirements by applying appropriate environmental controls, clean-up systems, monitoring and operating procedures to minimise emissions. Air emissions controls are set out in the RPP submission alongside the Contractor's monitoring systems so that the impact of emissions (air, soil, surface/ground water) to the environment and human health will be minimised. An environmental permit application would be submitted by VES to the Environment Agency for approval during the planning process addressing all relevant parts of the applicable legislative requirements.

7 Policy and legislation

7.1 The RPP is designed to meet the requirements of the Contract (which is to manage all residual waste remaining following recycling, composting and other waste minimisation initiatives of the HWP). The proposals have been tested against the aims and objectives of the Joint Municipal Waste Management Strategy 2007 (JMWMS) for Hertfordshire and can be summarised as set out below:-

7.1.1 The JMWMS seeks to promote the waste hierarchy through waste prevention and minimisation, reuse, increased recycling, composting and recovery of the remaining residual waste;

7.1.2 Continued reliance on landfill is not sustainable due to its contribution to global warming, scarce local availability and severe financial penalties (this latter link to the Waste Emissions & Trading Act 2003 has since been repealed but key environmental and commercial drivers remain);

7.1.3 The strategy was developed following consultation with local stakeholders;

7.1.4 Locally generated waste needs to be handled locally; and

7.1.5 The Facility is part of a wider solution and does not prohibit future plans for waste reduction initiatives or increases in the levels of re-use, recycling and composting.

7.2 Whilst not part of the Waste Local Development Framework, the Council's Waste Spatial Strategy (revised July 2009) was prepared on behalf of Hertfordshire County Council as Waste Disposal Authority. This document sets out the long term requirements of the Waste Disposal Authority as an input to the Minerals & Waste Development Framework process.

7.3 The Waste Spatial Strategy (WSS) identifies the location of some existing waste management facilities used by the Waste Disposal Authority and illustrates specific drive time isochrones to identify areas of search for potential new household waste recycling sites, waste transfer stations, in-vessel composting sites, waste bulking/depot facilities and residual waste treatment facilities.

7.4 To facilitate the more sustainable disposal of LACW in the County to 2031 and negate the need for continued waste export, the WSS considers that the following new and improved waste management facilities are likely to be required and, specifically in relation to the RPP proposals, this included "A new major waste treatment facility, two new waste transfer stations and retention of 70,000 tonnes per annum of landfill capacity for untreatable Municipal Solid Waste at 2031/32, rising to 75,000 tonnes per annum at 2039/40."

7.5 Should the RPP proposals proceed, this would remove the need for the Council to provide an Eastern Waste Transfer Station with local district and borough council's providing direct delivery to the Facility. It would also remove the assumed retention of some landfill capacity for "untreatable waste" as the Facility would manage and process all Contract waste for Hertfordshire.

7.6 The RPP proposals have been considered alongside current and potential future legislation pertaining to the waste management industry, such as the new circular economy package that was adopted by the European Commission on the 2 December 2015 as outlined in further detail in Appendix 3.

7.7 The RPP proposal will fulfil the requirement for a major waste treatment facility identified by the strategy and facilitate more sustainable management of waste in the county. It will also do this without undermining the prospects for increased recycling and composting due to its flexible yet robust technology that can adapt to changing waste composition and calorific values. This will enable it to maintain operational capacity through acceptance of "top-up" compatible Commercial Waste and Industrial Waste (but being less reliant on these 'other' inputs than the New Barnfield proposals) whilst also achieving wider landfill diversion benefits for those waste streams.

8 RPP environmental assessment

8.1 Information provided in the RPP submission demonstrates that it is a good environmental choice as it will virtually end reliance on environmentally damaging landfill and substantially reduce CO_2 equivalent emissions.

8.2 As is the case when considering the environmental impact of major infrastructure such as that proposed, the RPP provides a performance comparator using the Waste and Resources Assessment Tool for the Environment ("WRATE") which is a Government tool for assessing climate change impact. VES have provided a comparative effect of delivery of the Facility against both a baseline of landfill disposal and the Council's existing interim contract arrangements (a mixture of EfW and landfill).

8.3 WRATE analysis carried out by VES shows a reduction of 116 million kg CO_2 equivalent per annum when compared to landfill and a reduction of 80 million kg CO_2 equivalent per annum when compared to existing arrangements. To provide some context, 80 million kg CO_2 is broadly the equivalent of all the emissions generated by the Council's street lighting[3] over a 5 year period.

8.4 Combined Heat and Power delivery would further improve the environmental performance of the Facility by making more efficient use of the heat created during the process. The RPP Facility is designed as heat 'enabled'.

8.5 DEFRA published their "Energy from Waste – A Guide to the Debate" in early 2013 to provide what is described as a 'starting point for discussions about the role energy from waste may have in managing waste'. As such the DEFRA guide does not seek to provide an authoritative set of answers, rather it highlights the issues for discussion, the options available and the process for decision making.

8.6 The key messages of the DEFRA guide are that 'residual' waste is mixed waste that cannot be usefully reused or recycled. Whilst some recyclable materials may remain in the waste, they are too contaminated for recycling to be economically or practically feasible. DEFRA also identifies an alternative way of describing residual waste as being 'mixed waste which at that point in time would otherwise go to landfill'.

8.7 DEFRA acknowledges that increased prevention, reuse and recycling will have a downwards effect on the amount of residual waste requiring treatment in the

[3] The highways electricity figure is sourced from the Council's energy management team and includes street lighting, signs, signals, subway pumps and electric charging points and is recorded as 15,837,000 kg CO_2 equivalent in 2014.

future, however energy from waste will remain important. In this regard, the guide states that the historical image of energy from waste is now outdated and a new generation of energy from waste plants are helping to continue the drive towards better, higher-efficiency energy from waste solutions. Under the Waste Framework Directive facilities are assessed on the level of energy produced from waste they achieve. High efficiency facilities achieve R1 status allowing them to be classed as recovery facilities rather than disposal facilities. The Contractors RPP proposals will achieve R1 status and will therefore be considered as a recovery process under the Waste Framework Directive, therefore, it can be considered reflective of this recognised trend.

8.8 The conclusion drawn by the DEFRA guide is that energy from waste has less adverse carbon impact than landfill.

8.9 With regard to emissions, the DEFRA guide states that as a result of the clean-up measures in modern energy recovery facilities “all the waste gases emitted from the plant meet the very tight limits placed on them by EU legislation. As a result, Energy from Waste Plants contribute only a small fraction of both local and national particulate and other emissions”.

8.10 With regard to health, DEFRA recognises that the potential health implications of emissions are often a focus of concern, hence the need for tight regulation. However the Health Protection Agency (HPA - now Public Health England) also reviewed the wide ranging research undertaken, in order to examine the links suggested by some, between emissions from EfW facilities and the effects on health. The guide identified that the conclusions of the HPA are that, well managed facilities make only a small contribution to local concentrations of pollutants (and whilst not discounting the possibility of such small additions having an impact upon health, if they exist, they “are likely to be very small and not detectable”). This conclusion has been further confirmed by the first data released from the findings of a more recent study commissioned by the HPA successor body - "Public Health England".
http://www.sciencedirect.com/science/article/pii/S1352231015300753

8.11 Initial informal consultation with Hertfordshire’s Director of Public Health indicates his preliminary conclusion is that health risks are minimal. However, he has indicated that he will need to consider the matter further and will also seek a formal view and advice from Public Health England. He has undertaken to provide more considered feedback (informed by advice from Public Health England) which will be published in due course.

8.13 In summary, the RPP proposals are a key part of a solution for Hertfordshire's LACW which remains after continued and improved efforts on waste prevention and diversion through re-use, recycling and/or composting are made. The continued use of landfill, scarcity of local disposal options, and therefore ever increasing distances to access final disposal points, leads to a reasonable conclusion that the proposed Facility represents the right environmental solution for treating Hertfordshire's residual LACW closer to where it is produced.

9 RPP financial proposals

9.1 The savings position of the New Barnfield solution was £667m and this was reduced by in the order of £217m due to the loss of PFI credits. It should be noted that this initial assessment was a comparison against the 2010 set of interim disposal contracts which included a significant use of landfill as a means of disposal.

9.2 The current set of interim disposal contracts (2014) were procured at a time when new EfW facilities in the surrounding area (i.e. Oxfordshire and Buckinghamshire) were nearing completion and there was competition for residual LACW in order to assist in the EfW commissioning process. The disposal rates are considered favorable in the context of the current market and savings in the waste management disposal budget of £1.5m have been delivered.

9.3 It is considered unlikely that further savings could be achieved with a future extension of these short term contracts and an increase in contract rates per tonne in the region of 10% is in-line with average market gate fees. This pressure has been identified through the Council's Integrated Plan process and was confirmed in discussions with existing interim service providers.

9.4 The Council holds the risk under the Contract for movement in the foreign exchange rate. Since financial close in 2011, when the EUR:GBP position was 1.1946, movement in the foreign exchange rate has generally been in the council's favour. As was the case for New Barnfield, the RPP proposal has a significant proportion of its capital expenditure priced in Euros and so the risk profile remains the same. A stronger pound against the Euro will make the final facility price cheaper and vice versa.

9.5 The RPP figures are calculated using a baseline of 1.35 EUR:GBP (a baseline of 1.35€ was used following analysis of 2015 rates up to the time of submission).

9.6 Given the Site is owned by Tarmac and would be secured by VES on a long lease ("the Headlease"), on the Expiry Date of the Contract the Site and Facility

would not be in the Council's control. At the end of the Contract Period, VES retain the Facility and would be able to continue to operate it for the final ten years of its planned life (40 year total) based on 100% non-contract waste. This allows a longer depreciation period for the Facility which is reflected in a lower unitary charge for the Council (the calculated gate fee per tonne in accordance with the payment mechanism in the Contract). This also means at the end of the Headlease term that VES rather than the Council is responsible for decommissioning the Facility and returning the Site to Tarmac as a "flat site".

9.7 To retain flexibility in relation to the Facility, an "option" has been negotiated to make a one-off capital investment 2 years prior to the end of the Contract Period to purchase the remaining term of the Headlease from VES. The Council would then be Tarmac's tenant rather than VES and could use the Facility for the remainder of the Headlease term of the Facility. The Council has no obligation to exercise this option and the projected payment for the option is set out in the Part II Annex to this report.

9.8 In order to test the outputs from the affordability modelling a number of sensitivities were run to ascertain the economic impact different factors would have on the overall affordability. The sensitivities modelled covered a range of areas; differences in indexation, differences in the proportion of waste that could be treated at an EfW facility and, where a range of information was provided in response to the market consultation exercise, differences in haulage and gate fees.

9.9 In carrying out such sensitivities it should be noted that the RPP is effectively being considered on a 'worst case' scenario, the financial position reflects only the guarantees within the RPP financial model and contract payment mechanism and is not a position based on projections of any of the 'gain-share' opportunities within the Contract. 'Gain share' opportunities in the Contract exist where any income above the guaranteed threshold in the Contract payment mechanism is shared between VES and the Council. In contrast, the credible alternatives have been considered in a more optimistic manner in order to robustly challenge the base case for the RPP.

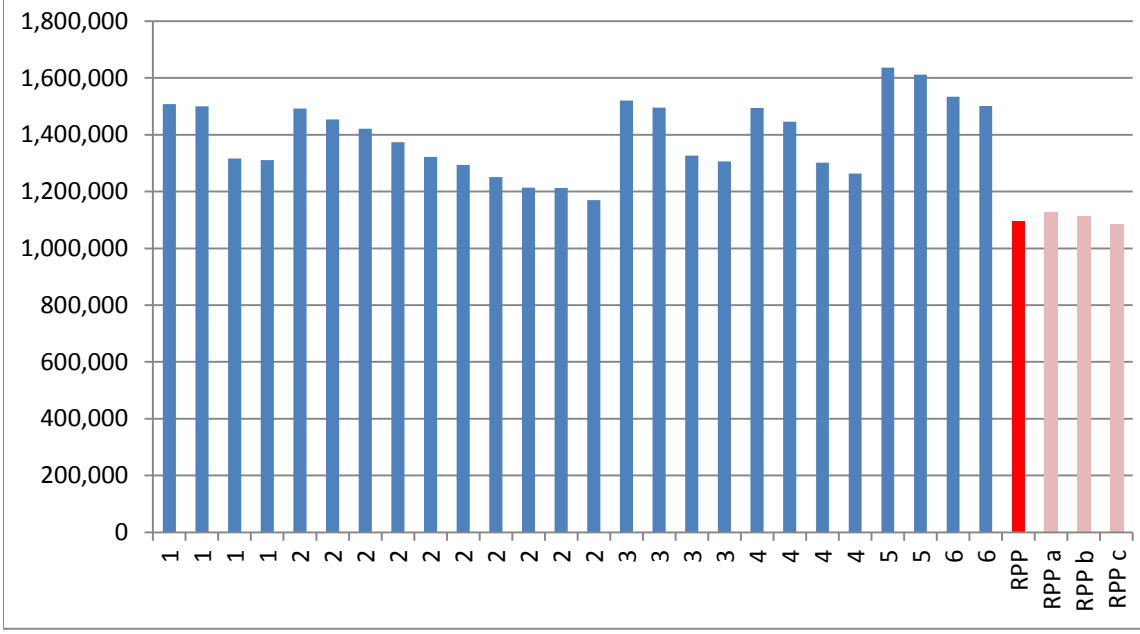
9.10 Further detail of the assumptions and modelling are detailed in Appendix 5 and the outputs are summarised in *Figure 4*. In all scenarios tested, the RPP is projected as the most financially efficient for the Council.

9.11 The RPP was also tested against the original 2011 Contract final tender prices and, due to indexation, whilst the cost to the Council of the RPP is higher than the original New Barnfield proposal as tendered, the cost of the RPP is better value for money than if the New Barnfield proposal had been delivered post

approval following the call-in and public inquiry (using the delay indexation provisions in the Contract).

9.12 The financial benefit of having an MPT was considered as part of the Council's review of the RPP. A review of the MPT within the New Barnfield plan showed that the additional costs associated with running the MPT marginally outweighed the financial benefits such as increased recycling revenue and increased third party waste capacity. The reduction in market rates for recyclates as compared to 2011 means that an MPT in the RPP would be unlikely to make a financial contribution to the project and would most likely increase the Council's forecast costs. That said it is site limitations and not financial considerations that meant an MPT could not even be considered.

Figure 4: Cost of Residual Waste Disposal over 30 year period (£,000)



Key to modelled Credible Alternative Scenarios	
1.	EfW solution with multiple suppliers
2.	EfW solution with a single supplier
3.	RDF solution with multiple suppliers
4.	EfW/RDF combination
5.	Solution using the WRAP EfW median gate fees
6.	Solution using the WRAP MBT/MHT median gate fees
RPP	RPP and foreign exchange rate sensitivities (RPPa to RPPc)

9.13 The cheapest credible alternative modelled was Scenario 2, an EfW solution with a single supplier. As can be seen in Table 1, even when using the most

optimistic assumptions for the scenario, the RPP is better value. The RPP financial assessment indicates that it is forecast to be £72m better over 30 years compared to the best case for Scenario 2. Compared to the average and worst case of Scenario 2 the RPP is £210m and £395m better respectively.

9.14 It is now the case that the first 'band' of 180k tonnes of waste delivered per annum into the Facility would be unindexed, i.e. at a fixed cost for the 30 year operational period and at a price that compares well with the current market and prices from the market engagement exercise. This provides the Council with an incentive to continue to build on the good work to date to prevent and divert residual LACW by supporting recycling and composting as part of a linked solution. It also does so within a reasonable timeframe towards the proposed national target years.

Table 1: Cost of residual waste disposal of the RPP against the cheapest credible alternative

Scenario (£1000s)	Seven Years		Fifteen Years		Thirty Years	
	Residual Waste Disposal costs (NPV[4])	**Cost advantage of RPP (bid)**	**Residual Waste Disposal costs (NPV)**	**Cost advantage of RPP (bid)**	**Residual Waste Disposal costs (NPV)**	**Cost advantage of RPP (bid)**
Single EfW - Highest cost	225,000	**-15,000**	549,000	**-82,000**	1,492,000	**-395,000**
Single EfW - Average (median)	222,000	**-13,000**	518,000	**-51,000**	1,308,000	**-210,000**
Single EfW - Lowest cost	219,000	**-9,000**	485,000	**-18,000**	1,170,000	**-72,000**
RPP @ 1.25	211,000		479,000		1,128,000	
RPP @ 1.30	210,000		473,000		1,112,000	
RPP @ 1.35 (RPP bid price)	210,000		467,000		1,098,000	
RPP @ 1.40	209,000		462,000		1,084,000	

9.15 The comparative value for money of the RPP versus other options is due to a combination of factors.

9.15.1 A local solution reducing haulage costs

9.15.2 Commitment by the Council to a long term contract for the majority of the capacity (and a GMT)

9.15.3 VES's return requirement reflects the fact that a Council led project presents less risk than a merchant project

9.15.4 Partial indexation of the Council's unitary charge

[4] Net Present Value (NPV) is the present value of future costs.

9.15.5 Technology solution is efficient meaning electricity generation is high

9.15.6 The Council is sharing the planning risk (if planning permission is not granted the capped termination cost applies)

9.16 In addition to the value for money reasons in 9.15 above, the revenue sharing clauses on third party waste and electricity (over guaranteed Council income levels) have the potential to provide additional beneficial financial opportunities for the Council.

9.17 The credible alternatives are market price solutions (even for medium terms) where the provider takes most of the risks. In the RPP, shared risks are significant contributors to a more bankable solution and better value for money for the Council.

9.18 In conclusion, a comparison of the RPP with the market engagement responses has been limited to deliverable and realistic returns from industry participants which are capable of providing a solution for Hertfordshire's residual waste from 2018 and/or 2021 (the end of extended current arrangements). It shows that, although credible alternative options are available, the application of full or partial indexation within those arrangements and the increased haulage costs to access the alternate facilities confirms that the most financially beneficial approach is to proceed with the RPP.

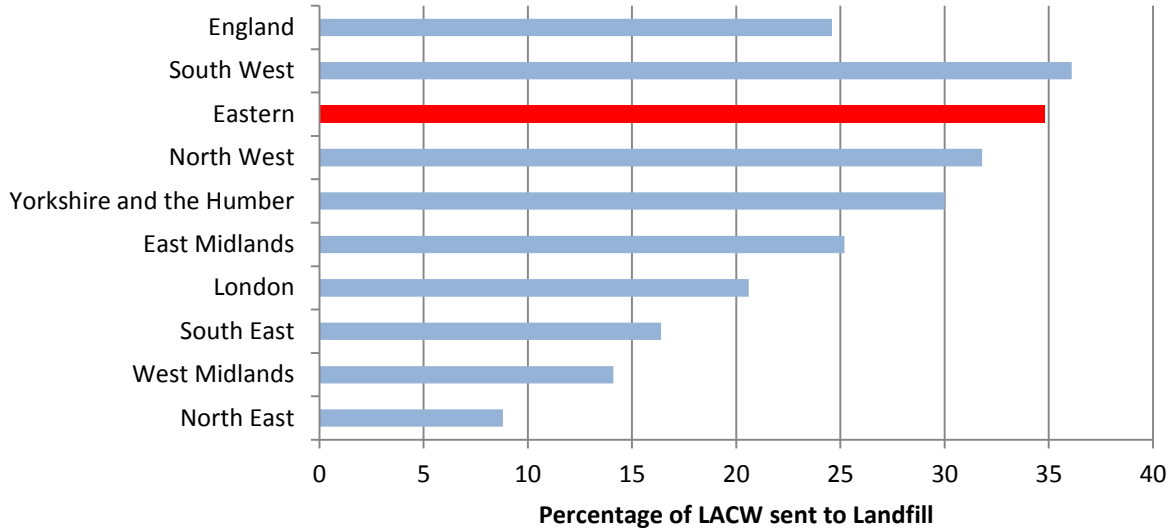
10 Defra statistics and capacity gap

10.1 Statistics from the national waste management reporting system (WasteDataFlow) for 2014/15 have recently been released by Defra. They show that, provision of EfW facilities varies by region. As summarised in *Figure 5*, the Eastern region retains a comparatively high use of landfill in comparison to regions in the North or Midland areas of England.

10.2 There are a number of industry bodies predicting that the UK will fail to provide the infrastructure that it requires in order to meet the national targets for diversion of waste from landfill. However, Defra's preferred assessment of the national capacity gap relies on the established industry consultancy firm, Eunomia who suggest there will be an excess of capacity in the UK.

10.3 Eunomia produce a report every 6 months to assess if the UK is still on course to exceed the waste infrastructure it will need to meet future national targets. The latest update to the "Eunomia Residual Waste Infrastructure Review" was issued on 27 December 2015 and maintains that, *"The UK is on course to hit its targets. This is especially true if it is to achieve the higher levels of recycling envisaged in the European Commission's Circular Economy Package, but remains true at lower recycling rates"*.

Figure 5: Regional Percentage of Local Authority Collected Waste Sent to Landfill 2014/2015



10.4 The Eunomia report states that *"capacity of facilities either currently operational, being built or having reached financial close and expected to be operational by 2020/21, combined with anticipated waste exports, will total 23.1 million tonnes per annum of demand. Fully utilised, this will exceed the 22.7 million tonnes of residual waste expected to be produced in the same year"*.

10.5 It is interesting to note that, in contrast to some of their previous publications, the Eunomia report applies assumptions for an increase in household waste growth (a 0.5% year on year increase) and commercial waste (a 0.5% year on year increase). It assumes industrial waste will reduce (a 1% year on year reduction).

10.6 In summary, it may or may not prove to be the case that the UK meets its targets but the Eastern region retains a comparatively high level of landfill and the Council faces competition to access to a limited number of regional facilities. The recently released Defra statistics suggest that, nationally and in overall terms, waste growth is occurring, analysis of the Defra statistics for the Eastern region demonstrates similar levels of overall waste growth. Table 2 shows the level of growth in England and the Eastern region.

Table 2: Waste growth					
England (,000's)	**2012/13**	**2013/14**	**Percentage change**	**2014/15**	**Percentage change**
Total LACW	24,955	25,518	2.25%	25,737	0.86%
LACW residual	14,379	14,587	1.45%	14,670	0.57%
Total household waste	22,580	22,967	1.71%	23,169	0.88%
Household residual waste	12,821	12,987	1.30%	13,052	0.50%
Eastern Region (,000's)	**2012/13**	**2013/14**	**Percentage change**	**2014/15**	**Percentage change**
Total LACW	2,794	2,877	2.94%	2,904	0.95%
LACW residual	1,465	1,482	1.19%	1,498	1.04%
Total household waste	2,616	2,685	2.64%	2,706	0.76%
Household residual waste	1,347	1,363	1.16%	1,372	0.66%

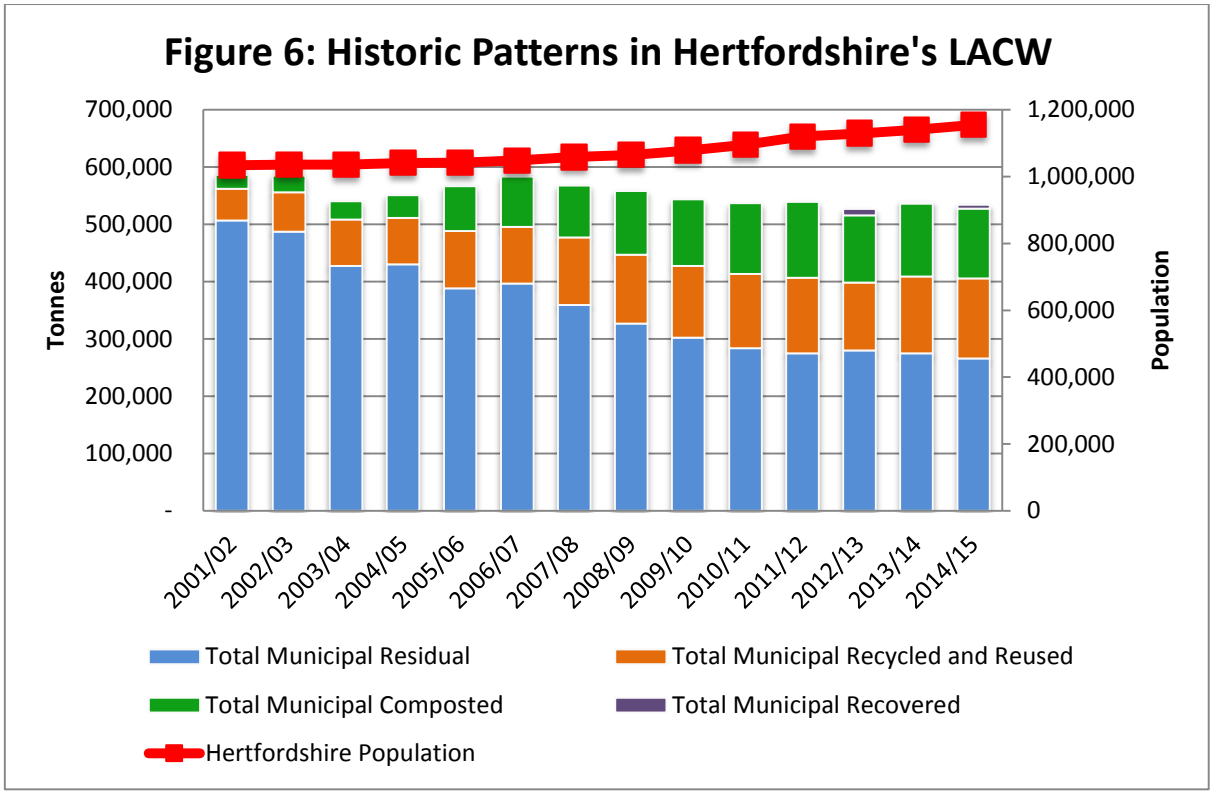
11 Hertfordshire's residual LACW

11.1 In 2014/15 Hertfordshire County Council disposed of c. 534,000 tonnes of LACW, c. 266,000 tonnes of which was residual LACW requiring disposal. *Figure 6* shows the quantity of LACW in each year since 2001/02.

11.2 It should be noted that since 2001/02 significant improvements have occurred in the quantity of material separated for recycling and/or composting due to implementation of new services in kerbside collection and at household waste recycling centres. This is particularly pleasing considering the increasing population in the County over the period shown.

11.3 Despite improvements in recycling there remains a significant quantity of material that must be disposed and/or treated and it is becoming increasingly more challenging to deliver further improvements in these times of fiscal austerity, future population pressure and when the majority of the 'easy wins' have already been delivered. The County's recycling rate has remained relatively static since 2011/12 at or just under 50% of household LACW.

11.4 As acknowledged by Eunomia in their December 2015 report, predictions in future waste volumes cannot be an exact science and there are many factors to take into account such as further gains (or losses) that might be possible in recycling and waste minimisation, the state of the economy, services, future targets and population pressure.



11.5 To inform the RPP and market consultation exercise, officers have produced an updated waste flow model that takes into account recent and known changes in kerbside collections in Hertfordshire and improvements in separation for re-use, recycling and composting. Planned alternate methods of treatment for suitable parts of the residual waste stream e.g. street sweeping diversion have also been modelled. Extracts from the new wasteflow is set out in Table 3 below and shows a reduction from the levels previously estimated when producing an outline business case for PFI credits that fed into the procurement for the Contract.

Table 3: Waste flow

Contract Year	Residual Contract Waste projection (tonnes per annum)
2015/16	258,000
2020/21	266,000
2030/31	291,000
2050/51	340,000

11.6 In modelling future waste growth, officers have assumed that Hertfordshire will continue to invest and work on waste minimisation initiatives and that this will successfully mitigate increases in waste associated with economic growth. The projections are therefore limited to future housing growth using the adopted and/or latest projections of the district and borough local plan commitments for housing numbers.

11.7 Discussions with VES in relation to the RPP concerned a Facility that is sized for the Council's needs and less reliant on third party waste input. This concluded with VES' proposal of a Facility sized at 320k tonnes per annum but with an obligation to dispose of volumes up to the current Contract requirements relating to New Barnfield of 352k tonnes per annum should waste volumes prove higher in the long term at no extra cost. The reduced GMT (Guaranteed Minimum Tonnage) level of 135k tonnes per annum was also settled as a further significant improvement for the Council during RPP discussions.

11.8 Projections on Hertfordshire's residual waste growth must be considered in context with the major service changes at the kerbside in recent years. This is detailed further in Appendix 4 and summarised in table 4 below.

Table 4: Residual waste growth by Hertfordshire's WCAs

	2012/13 to 2013/14	2013/14 to 2014/15	2014/15 to 2015/16 (Qtrs 1 to 3)
All WCA's (including service changes)	-0.93%	-0.67%	-0.01%
WCA's (excluding service changes)	+1.81%	+0.98%	+1.72%

11.9 The volumes of residual waste that have been used in the RPP are now based on a more comprehensive set of services at the kerbside across Hertfordshire and have been tested against a range of sensitivities to challenge the suitability of the proposed Facility to meet Hertfordshire's needs. The detail of these sensitivities is also detailed in Appendix 4. This shows that, of the scenarios tested, there is no scenario where the anticipated level of residual waste fails to meet the GMT presented by VES in the RPP.

11.10 Whilst these projections suggest that the GMT set in the RPP proposals is set at a level that represents a very low risk of breach, and is not at a level that inhibits the desire to improve the proportion of material that is prevented, separated for re-use or diverted for recycling or composting, it cannot be absolutely guaranteed that the Council will provide the GMT throughout the Contract period. At the same time, the GMT is commonly linked to the unitary charge payments in contractual financial models and lower GMTs are typically reflected in higher prices paid as it is seen as a risk transfer for the contractor to source higher volumes of third party waste to meet the optimum performance level of a facility.

11.11 Should the Council fall short of the GMT the Contract contains mechanisms that, in the first instance, require VES to source waste from its own or third party sources ("Substitute Waste") in accordance with an annual plan, thereafter, the Council may source waste itself to fulfil any shortfall. With consideration of VES'

local and national commercial operations, the RPP provides substantial further assurance that VES have more than sufficient commercial waste under their control to meet any shortfall that may arise, however unlikely this is currently believed to be.

11.12 Analysis summarised in *Table 5* below shows the recycling rate that would need to be achieved if 135k tonnes per annum (reduced GMT agreed for the RPP) of residual waste was generated by the Council according to the revised Wasteflow projections.

Table 5: Recycling rate if the GMT was met but not exceeded

	2015/16	**2020/21**	**2030/31**	**2050/51**
Recycling Rate should 135,000 tonnes per annum of residual waste be produced	74.79%	75.97%	78.02%	81.21%

11.13 In summary, whilst improvements in the reduction of residual LACW have been made, there is currently underlying residual waste growth in Hertfordshire most probably linked to an improving economy and increased provision of housing. As recent waste compositional analysis shows, further improvement can still be made although this requires investment and efforts from partner authorities and residents to be delivered and the GMT is set at a level that would enable all Hertfordshire authorities to deliver significant further increases in the proportion of LACW that is prevented, re-used or diverted for recycling/composting.

12 Commercial implications

12.1 The RPP solution will be delivered through the current Contract with VES but to give effect to the RPP certain changes are proposed to the Contract. Key contractual changes are described in Appendix 6 to this report.

12.2 The RPP maintains the Contract services requirements and Contract targets with a number of improvements to the commercial terms for the Council. The proposed solution also offers flexibility in relation to the Facility at the end of the Contract Period.

12.3 As the Contract was a PFI contract and the Council was to be in receipt of a Waste Infrastructure Grant from Defra, the Contract continues to be on terms consistent with the Defra model contract for waste infrastructure projects (WIDP contract) and is consistent with HM Treasury's guidance on PFI contracts that was in place when the Contract was entered in 2011 (guidance now withdrawn). The risk allocation in the Contract was described in the report to Members at the time of the procurement in April 2011.

12.4 The risk allocation assumed in the Contract is not impacted by the RPP proposal. The changes proposed to be made to the Contract to bring the RPP into effect are consequential on the RPP. There are some changes that represent an improved commercial position for the Council but overall the changes are considered to be either of no commercial significance or their overall impact on the Council is neutral. The changes proposed to the Contract are not substantial.

13 Financial implications

13.1 The financial implications for the Council associated with the RPP are described in section 9 above.

13.2 There are no changes to those outlined in the Council's integrated plan for the short term pressures due to increased landfill tax, gate fees post natural expiry of the existing interim contracts and the cessation of the long term Edmonton EfW arrangements. The planned savings for reduced use of advisors in the RWTP budget would be delivered should the Council decide to accept or reject the RPP.

13.3 If the RPP is rejected and the Contract terminated the Council will have to pay VES contract termination costs in the order of £1.2 million. As part of the risk management process for the RWTP a special contingency was created to deal with contract risks. In the event of termination following rejection of the RPP, this reserve could be used to meet termination costs. These costs are not payable if the Council accepts the RPP unless VES fail to obtain planning permission for the RPP solution at which time the Contract would be terminated.

13.4 The provision of infrastructure such as waste transfer stations requires capital investment. A high level estimate of cost for constructing an eastern transfer station has been identified (in the region of £6 million) and this funding is already built in to the Council's capital programme. Capital investment of a similar scale would be required for the development of a northern transfer station which would need to be included within the Integrated Plan Process. Should the RPP proceed and achieve planning permission, part of the identified £6 million for the eastern transfer station could be released and a new bid placed to fund a transfer station in the north of the County.

14 Legal Implications

14.1 In accordance with the Contract, the Council may now either accept the RPP or reject it. If the Council accepts the RPP it will need to bring the RPP into effect by varying the Contract and entering into other associated ancillary documents.

14.2 If the Council accepts the RPP the Council and VES will enter in to Deed of Variation to the Contract (the RPP Deed of Variation). The RPP Deed of Variation will recite key contextual matters including that:

14.2.1 The RPP Deed of Variation is entered pursuant to the RPP mechanism included in the Contract;

14.2.2 VES' parent company guarantor consents to the variation and simultaneously enters a new parent company guarantee on substantially the same terms as the "agreed form" in the Contract

14.2.3 A restated Contract is attached updating the Project Agreement and relevant Schedules to be varied by the RPP.

14.3 In addition to the RPP Deed of Variation, VES and the Council will also enter into a number of ancillary documents to give effect to the RPP. The key documents are:

14.3.1 VES will enter into a new construction sub-contract with its selected construction sub-contractor for the RPP. The construction sub-contract is in substantially the same form as the sub-contract entered with the 2011 Contract;

14.3.2 The Council will enter into a collateral warranty with the construction sub-contractor to give the Council direct rights against the construction sub-contractor in certain scenarios. The collateral warranty is in substantially the same form as the warranty entered with the 2011 Contract;

14.3.3 VES' parent company will provide a parent company guarantee in support of the RPP and VES to which the Council is also a party. The guarantee is in substantially the same form as the guarantee entered with the 2011 Contract;

14.3.4 VES and the Council will enter into various property agreements between themselves and with Tarmac to give effect to the property arrangements.

14.3.5 VES and the Council will enter into a deed of appointment for an independent certifier who will be engaged to sign off various construction and commissioning tests for the Facility. The deed of appointment is in substantially the same form as the deed envisaged for the 2011 Contract.

14.4 In considering the variations to the Contract proposed by the RPP the Council needs to consider the provisions of the Public Contract Regulations 2015 and in particular regulation 72 which deals with modification of contracts during their term. Regulation 72 permits contracting authorities to modify (vary) a contract

without a new procurement where the modification (irrespective of its value) is not substantial within the meaning of regulation 72(8) of the Public Contracts Regulations 2015. The proposed changes to the Contract to bring the RPP into effect are not substantial within the meaning of regulation 72(8) of the Public Contracts Regulations 2015 so that the Council is entitled to accept the RPP and enter into the RPP Deed of Variation without re-procuring the Contract.

14.5 If the Council rejects the RPP it will need to terminate the Contract and pay compensation on termination to VES. The compensation payable on termination is detailed in section 13 of this report (Financial implications).

14.6 Further detail on the legal implications associated with the RPP is included in the Part II annexe.

15 Equalities implications

15.1 When considering proposals placed before Members it is important that they are fully aware of, and have themselves considered the equality implications of the decision that they are making.

15.2 Rigorous consideration will ensure the proper appreciation of any potential impact of that decision on the Council's statutory obligations under the Public Sector Equality Duty. As a minimum this requires decision makers to read and carefully consider the content of any Equalities Impact Assessment (EqIA) produced by officers.

15.3 The Equality Act 2010 requires the Council when exercising its functions to have due regard to the need to (a) eliminate discrimination, harassment, victimisation and other conduct prohibited under the Act; (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it and (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it. The protected characteristics under the Equality Act 2010 are age; disability; gender reassignment; marriage and civil partnership; pregnancy and maternity; race; religion and belief, sex and sexual orientation.

15.4 An Equality Impact Assessment (EqIA) has been undertaken in the case of rejection or acceptance of the RPP and is detailed at Appendix 7.

16 The assessment of alternative options available to the Council

16.1 In order to inform the discussion and evaluation of the RPP, officers have held informal discussions with representatives from a number of existing and potential service providers to understand the alternative options available and a formal market engagement exercise was carried out.

16.2 A Prior Information Notice ("PIN") was placed in the Official Journal of the European Union (OJEU) on the 19 September 2015 which invited suitably experienced and interested suppliers to complete a questionnaire. The purpose was to more formally collect information on industry ideas of how to deal with Hertfordshire's residual LACW, an indication of prices, available capacity and their view on preferred technology and contract length to provide the Council with best value and performance.

16.3 To assist respondents in submitting their proposals, the Council's updated waste arisings and recent compositional analysis accompanied the PIN.

16.4 The responses from this exercise were returned on 23 October 2015 and further clarification was obtained to assist in the Council's affordability analysis and to inform the Member decision making process.

16.5 Responses were received from 10 companies with a combination of 14 solutions presented in total. In summary:-

16.5.1 All of the responses proposed direct thermal treatment or pre-treatment followed by thermal treatment.

16.5.2 9 of the 14 solutions indicated that they could accommodate the whole of the County's projected waste volumes.

16.5.3 A clear indication was given that longer term contracts would offer the Council the best value for money with 5 of the 10 companies offering services over any contract length (7 years - short, 15 years - medium or 30 years - long)

16.5.4 Those responses which involved pre-treatment and export to mainland Europe indicated a preference for short or medium length arrangements.

16.5.5 Of the 14 solutions presented, 4 were for pre-treatment of residual waste into a Refuse Derived Fuel (RDF) prior to thermal treatment, 4 were for Design Build Finance and Operate arrangements and 6 were for service contracts for thermal treatment or a combination of thermal treatment and landfill provision.

16.5.6 All responses indicated that road transfer was the most likely mode of access albeit one did have rail access (if an available option) and those indicating export to mainland Europe required waste shipping arrangements to access final disposal facilities.

16.7 The Council does not currently have access to move residual LACW by rail. The uncertainty over delivery and accurately forecasting the level of funding that may be required for development of rail access restricted the assessment of credible alternatives to accessing facilities by road (as is currently the case) and the assumption that a network of supporting infrastructure in the North and East of the County could provide such transfer arrangements or be configured to develop a processing facility to produce Refuse Derived Fuel (RDF) for export.

16.8 Recently, regional capacity in the existing interim disposal arrangements has been reduced since the time of market consultation. Specifically, the Ardley EfW facility in Oxfordshire (http://www.letsrecycle.com/news/latest-news/viridor-secures-two-residual-waste-deals/) has signed two new long term contracts for 130k tonnes per annum to add to a previous commercial arrangement with a service provider for 50k tonnes per annum. This increases the risk that, without a local solution, part or all of Hertfordshire's residual waste will need to be transported increasing distances to access suitable disposal facilities. Extensions to the existing interim disposal contracts are at the sole discretion of the Council but the future use of the facility for the medium or long term is less than certain.

16.9 In considering whether to model a new Design, Build, Finance and Operate (DBFO) option as a comparator to the RPP officers carried out an assessment of the key value drivers to determine whether a clear case can be made that a new DBFO project could improve upon the RPP offer provided by VES. Based on the considerations in Appendix 5, officers are of the view that a new DBFO procurement would not offer a sufficient expectation of comparable or better value than the RPP as to merit detailed modelling.

16.10 The prices presented by suppliers in the market engagement exercise were used to develop a number of potential, credible alternatives to feed into the affordability modelling to establish the long term costs of disposal and how these costs and alternative arrangements compare to the RPP presented by VES. The feedback from the market was grouped into the following credible alternative scenarios:

Scenario 1	EfW solution with multiple suppliers
Scenario 2	EfW solution with a single supplier
Scenario 3	RDF solution with multiple suppliers
Scenario 4	EfW/RDF combination
Scenario 5	Solution using the WRAP EfW median gate fees[5]
Scenario 6	Solution using the WRAP MBT/MHT median gate fees

[5] WRAP (2014) Gate Fees report 2013/2014 – Comparing the Costs of Alternative Waste Treatment Options
EfW post–2000 facilities: Median gate fee £94
MBT/MHT: Median gate fee £84

16.11 It is important to note that the market consultation exercise is not a formal procurement exercise and as such the information supplied is not binding and was supplied in good faith at the time of the exercise being carried out. Further detail of the exercise is contained within the Part II Annex to this report.

17 Development of Supporting Infrastructure

17.1 The Council owns a waste transfer station, Waterdale, in Garston, north Watford that currently bulks and transfers the residual LACW from seven of the ten district and borough councils. Further transfer stations are being considered, one in the north of the county and one in the east of the county. These are intended to supplement any final residual waste disposal services by transferring the waste collected by the district and borough councils that are an unreasonable travel time and/or distance from the final disposal point.

17.2 Currently c. 60,000 tonnes of residual LACW are directly delivered to a number of disposal points by the district and borough councils e.g. the Westmill landfill in Ware and Edmonton EfW in North London. The development of waste transfer stations is planned such that they coincide with expiry of the current contracts to ensure continuity in disposal service provision should the Council decide to reject the RPP.

17.3 Land in the County Council's ownership, behind the Ware Household Waste Recycling Centre, has been identified as a potential location for the development of an 'Eastern' transfer station and ground investigation works to establish suitability for development has been completed.

17.4 The next phase of this work is the detailed design stage prior to any application for planning permission. The project is identified in the Council's capital programme and could provide transfer facilities for East Herts District Council, Broxbourne Borough Council and potentially Welwyn Hatfield District Council. A newly developed site would also provide a more modern, fit for purpose and better equipped Household Waste Recycling Centre to serve residents of Ware, Hertford and the surrounding areas.

17.5 A site search has been carried out in the north of the county and has identified a range of potential sites. Although deliverability and the timing of any potential planning application are some way off and would need to be mindful of the North Herts District Council local plan process. There is currently no approved business case or capital allocation for such a development.

17.6 Continuity of service provision for North Herts District Council is provided by the existing Burymead Road transfer facility in Hitchin but the medium to long term

suitability of this location is not considered sustainable to meet future demand by either the District or County Council.

17.7 It should be noted that, whilst the outcome of the New Barnfield proposals do reinforce the need for a transfer facility in the north of the county, should Members approve the RPP this would remove the requirement for an Eastern Transfer Station should the Facility be delivered. This has been factored into the affordability modelling as local district and borough councils can be directed to deliver their collected residual waste to the Facility rather than have the Council incur the cost of waste transfer although, due to the length of time and lack of certainty in the planning application process, the Eastern Transfer Station is being progressed for the purpose of business continuity.

18 Overview and next steps

18.1 In overall terms, the RPP can be considered to present the Council with:-

18.1.1 A site that, with suitable mitigation, is deliverable and is locally situated to improve the existing position on waste transfer.

18.1.2 A technology that is robust, proven and, as part of a total solution, would divert waste from landfill whilst not preventing planned and future improvements in accordance with the waste hierarchy.

18.1.3 A solution that complies and is in accordance with applicable legislative requirements.

18.1.4 A solution that represents an improved environmental impact assessment than existing arrangements.

18.1.5 A proposal that represents the best value for money solution from those presented as credible alternatives by the market and provides long term surety of budgeted costs for residual LACW treatment.

18.1.6 A solution that meets the long term needs of the Council in regard of future pressures in population.

18.1.7 A solution that is deliverable within the terms of the existing Contract with VES.

18.2 With consideration of the existing interim contracts that allow for disposal options up until March 2021, the Council is in a position to seek the delivery of the RPP to provide best value, local delivery and long term surety in residual LACW treatment and, should the Facility not be delivered, the Council would have sufficient time to procure arrangements through an alternative procurement strategy informed by the recent market engagement exercise.

18.3 Although the commercial deal to reflect the RPP is now settled with VES on a subject to contract basis, the following areas are outstanding at the time of writing this report:

18.3.1 Conclusion of formal legal drafting of the RPP and associated Deed of Variation and ancillary documents that will be required to give effect to the RPP; and

18.3.2 Conclusion of formal legal documentation between VES and Tarmac in relation to the Site and lease structure described in section 14 of this report.

18.4 Subject to the satisfactory conclusion of the above, it is the intention that the RPP process will be concluded by 31 March 2016. If, however, the relevant documents to give effect to the RPP have not been settled by that date it will be necessary that a further short deed of Variation is agreed and entered into with VES to enable a further, short period for the documents to be settled prior to RPP acceptance. It is proposed that in these circumstances the date for acceptance of the RPP be extended to 30 June 2016.

19 Background papers

Waste Management Cabinet Panel:	**Date**
Waste Procurement Project	11/01/2008
Waste Procurement Programme Feasibility Study November 2007-February 2008	04/03/2008
Waste Procurement Project	29/04/2008
Waste Procurement Project – Progress Report	09/07/2008
Options for Future Waste Management: Outline Business Case	07/10/2008
Hertfordshire Waste Procurement Programme – Progress Report	06/01/2009
Hertfordshire Waste Procurement Programme – Progress Report	14/04/2009
Hertfordshire Waste Procurement Programme – Progress Report	09/09/2009
Hertfordshire Waste Procurement Programme – Progress Report	18/11/2009
Hertfordshire Waste Procurement Programme	09/07/2010
Hertfordshire Waste Procurement Programme	28/04/2011
Residual Waste Treatment Programme – Recycling and Energy Recovery Facility Timetable	07/03/2013

Highways and Waste Management Cabinet Panel

Residual Waste Treatment Programme – Options Available to the County Council Following the Secretary Of State's Decision to Refuse Planning Permission for a Recycling and Energy Recovery Facility at New Barnfield, Hatfield	04/11/2014

Community Safety and Waste Management Cabinet Panel

Residual Waste Treatment Programme Update	21/10/2015

Cabinet:

Options for Future Waste Management: Outline Business Case	20/10/2008
Options for Future Waste Management: Outline Business Case – Responding to Defra's Clarifications	19/01/2009
Hertfordshire Waste Procurement Programme	16/06/2009
Hertfordshire Waste Procurement Programme	19/07/2010
Hertfordshire Waste Procurement Programme	28/04/2011
Residual Waste Treatment Programme – Options Available to the County Council Following the Secretary Of State's Decision to Refuse Planning Permission for a Recycling and Energy Recovery Facility at New Barnfield, Hatfield	10/11/2014
Residual Waste Treatment Programme – Variation of the RWTP Contract	14/12/2015

Appendix 1 – Key Planning considerations

The Site

The Site covers an area of around 5.6 hectares, is currently owned by Tarmac (previously Lafarge Aggregates Ltd) and is an existing industrial site with planning permission to operate an asphalt coating plant, an aggregates railhead and a ready-mixed concrete plant. Aggregates are primarily brought into the Site via the rail siding which forms part of the Site. Road access to the Site is via Ratty's Lane. Ratty's Lane leads to the A10 Dinant Link Road via Essex Road.

The Site is bordered to the south by Rye House Power Station. The River Lee borders the site to the east and north. A railway line (which serves the rail siding within the site) borders the western site boundary and runs north east to south west.

The Site is situated in the eastern part of a heavily industrialised area to the east of the town of Hoddesdon. There is parkland to the east of the Site, with agricultural land beyond this. Parkland and some light industrial premises are located to the north of the Site beyond the River Lee, with light industry to the west and residential properties beyond this. Parkland, light industry, the River Lee and residential properties are situated to the south of the Site. Approximately 100m to the north of the boundary of the Site, beyond the railway line and across the River Lee, is Rye House Kart Club track. Rye House Speedway Stadium lies further to the north, approximately 300m from the boundary of the Site.

Approximately 350m to the north-east of the Site lies the Rye Meads Sewage Treatment Works owned by Thames Water Utilities Ltd.

The site is located in the ward of Rye Park, within the local authority area of Broxbourne Borough Council. The town of Hoddesdon is located approximately 500m to the west of the site, with the closest residential properties 400m to the north, and further residential properties 700m to the south east and 700m to the south. The nearest residential property to the Site is Lock Keepers Cottage, which lies approximately 20m from the eastern boundary of the Site, on the opposite bank of the River Lee.

There is a Local Wildlife Site immediately to the south of the site boundary within the Rye House Power Station. Rye Meads Site of Special Scientific Interest (SSSI), a Special Protection Area (SPA) and a Ramsar site (wetlands of international importance), all of which are designated for birds and a variety of wetland mammals and

comprise a range of marshes and lagoons, lie approximately 230 m to the north of the site.

Immediately to the south east of the Site lies further waste management premises currently under construction and comprising an Anaerobic Digestion (AD) facility and an Advanced Thermal Treatment (ATT) facility. Both are designed for the receipt of wastes arising from the Commercial and Industrial sector.

The Site lies adjacent to a large gas fired combined cycle gas turbine (CCGT) power station that provides standby capacity and is operated by Scottish Power.

The railway area stretches along the western boundary of the site, adjacent to the existing CCGT power station site. The length of the sidings is around 300m off the main connecting railway line and is included within the lease area available to the Contractor.

The majority of the residual waste and process materials utilised by the Facility will however be delivered to the Site via Ratty's Lane. The Site will include vehicular access and internal circulation for HGVs.

The majority of the buildings are proposed to be located in the central, western and southern parts of the site to avoid the high voltage power cables that cross the eastern boundary of the site. Within this area, there will be no buildings, only, the incoming and outgoing weighbridges, ramped access/egress to an elevated tipping hall, a storm attenuation pond and car parking and internal access/circulation links to the exit/entrance point onto Ratty's Lane.

Suitability and Deliverability

The Site is not identified for waste use in the adopted Hertfordshire Waste Sites Allocation Local Plan (WSALP), nor does it lie within one of the specific areas of search identified within the Waste Core Strategy. However, the Waste Core Strategy (Policy 7) makes provision for non-allocated sites to be advanced where they satisfy various objectives and criteria. The Contractor has appraised the site against this policy framework and in the light of other permissions granted (including the adjacent Trent Development site) has concluded that the site can be considered to be in conformity with the plan's provisions. In particular, whilst outside of the principle areas of search it remains well placed to serve the areas of waste arising, in addition, it offers an opportunity for the Council to avoid the need for an eastern waste transfer station, it is brownfield land allocated for employment uses in the Borough Plan, it has existing permissions for road and rail haulage of aggregates, it lies outside of the Green Belt and also offers co-location synergies with other adjacent waste and energy uses.

The site is safeguarded within the adopted Minerals Local Plan for rail aggregate depot use (under Policy 10 - Railheads and Wharves). The Contractor's RPP suggests that demand for such facilities in Hertfordshire has significantly reduced in recent years and the use of the site for such purposes is now largely redundant with other safeguarded sites offering better long term prospects.

The RPP proposals will nevertheless retain the rail sidings and will offer an opportunity for the export by rail of IBA arising from the facility process (and potentially from the adjacent 3rd party ATT facility) thus maintaining the strategic benefit of the rail link and its mineral related use. The long term but ultimately temporary nature of the ERF planning proposals also serves to mitigate against any future prejudicial impact on rail depot requirements/opportunities.

The adopted Minerals Plan makes provisions for exemptions to its safeguarding policy and this is considered relevant both in relation to its Employment use status in the Broxbourne Local Plan and in the criteria based policy provisions.

The Minerals Plan is currently under review and the Contractor has made representations with regard to the safeguarding objectives set out in the Initial Issues Consultation Paper. These seek to ensure that the adopted policy framework remains unchanged.

Site Attributes

- The Site is well located in terms of proximity to the sources of Waste arisings (although lying in the eastern part of the county, close to the A10, A1(M) and interchanges with the M25 and M11). It is also well located to benefit from rail transport where practical and affordable;
- The Site's overall size (5.6 ha, including rail sidings area) offers sufficient space for the proposed Facility and associated landscape enhancement (although with no space to accommodate a front-end MPT facility);
- The clustering of major employment uses around the Site presents combined heat and power (CHP) opportunities;
- The construction and continuing maintenance of the Facility will bring socio-economic benefits to the local community in terms of direct and indirect employment.
- An in-county solution would retain business rates within Hertfordshire with 40% of the rates going to Broxbourne Borough Council and 60% to the Council (consultation on the government's new business rates retention scheme is

expected to begin in the spring). It is estimated that business rates for the Facility would be in the order of £1.5m per annum.

Traffic and Highways

The Site is proximate to the major highway network, in particular its close proximity to the A10 affording connections to the rest of Hertfordshire and to the M25. Whilst local road constraints exist in relation to the Essex Road New River Bridge crossing and the need for lorry routing provisions, traffic generation and highway capacity assessments conducted by the Contractor indicate that the local network has adequate capacity to meet the needs of the development and it is considered that the use of Ratty's Lane together with other existing and future users is acceptable in principle and will be addressed further in the context of a detailed Traffic Assessment undertaken to support any future planning application.

From a wider logistics and sustainability perspective, the Site is well located in the County relative to the existing Waterdale Waste transfer station, the prospective locations for a northern Waste Transfer Station and other sources of Waste arisings. It also offers the benefit that the Council's current proposals for an eastern Waste Transfer Station would prove unnecessary if planning permission is obtained, as waste can be delivered direct to the Rye House site.

The capacity of the Site to accommodate the RPP has been evidenced by previous work undertaken by the Contractor in connection with its former Development Consent Order (DCO) application (2010/11) which was withdrawn at Examination stage following VES' withdrawal from the North London Waste (Fuel Use Contract) procurement process.

The design of the Facility represents what the Contractor considers to be the best alternative proposal to New Barnfield pending further detailed environmental assessment works, formal planning application preparation and pre-application consultation.

Appendix 2 – Technology Overview

This Appendix seeks to provide Members with a brief explanation of those alternatives available and to confirm that the selected RPP technology is a technology that will meet Hertfordshire's residual LACW disposal needs.

Residual waste disposal techniques can be split into two categories; Techniques for waste that can be treated directly and techniques for waste that requires pre-treatment or pre-processing.

Direct Treatment with no pre-treatment

Landfill

- The disposal of waste into or onto land.
- Strict construction and operational restraints are applied to sites to mitigate the environmental impact.
- On receipt the waste is weighed and checked to ensure compliance before being tipped and compacted to prevent odour, litter and pest infestations. Decomposition by microbes then occurs which, when combined with rainwater, creates a leachate. Gases are also released during the decomposition process.
- Landfill tax is a tax on all waste sent to landfill and is aimed at reducing the volume of waste sent for disposal at landfill. The current standard rate of landfill tax is £82.60 per tonne.

Incineration

- Incineration technologies involve direct combustion in the presence of oxygen to produce energy.
- Temperatures in excess of 850ºC are used to convert the waste into hot gases. The hot gases are then used to heat water in a boiler to produce steam. Turbines are driven to generate electricity and/or to provide heat (known as combined heat and power (CHP)).
- Any non-combustible materials remain as solids and are disposed of via the Incinerator Bottom Ash (IBA).
- Most incinerators include extraction equipment to remove metals from the IBA.
- Energy from Waste (EfW) facilities can vary in size. The size of the facility is dependent on a number of factors including the cost of the facility, the catchment area, the distance from waste resources and site constraints.

Pre-Processing/Pre-treatment

- A number of techniques typically require the residual waste to be pre-processed prior to treatment.
- Without pre-treatment the varying size and composition of unprocessed municipal solid waste is not suitable for most thermal treatments.
- The purpose of pre-processing is to produce a material with consistent physical properties and compliant chemical properties.
- Pre-processing includes manual and mechanical separation or sorting, shredding, grinding, blending with other materials, drying and pelletisation.

Advanced Thermal Treatment (ATT)

- Advanced Thermal Treatments tend to use either gasification and/or pyrolysis and typically require pre-processing.

Pyrolysis

- Typically the waste is heated to between 300ºC and 850ºC in the absence of Oxygen. The breakdown of waste produces a gas which may be condensed to form a syngas, char and fuel oil.
- Char can be used as a Refuse Derived Fuel (RDF) and the syngas in power generation.
- The cleaning of the syngas required increased technical experience.
- Pyrolysis is sometimes used as part of the pre-treatment process and fuel preparation for gasification.

Gasification

- Gasification occurs in the presence of limited Oxygen and at temperatures of greater than 650ºC.
- The process is largely exothermic but some heat may be required to initialise and sustain the process.
- Gasification produces a syngas which can be used in a boiler to generate steam which can be used for power generation, or a fuel in a dedicated gas engine.
- ATT facilities currently tend to be smaller (30-60,000 tonnes per annum) than incinerators.

Plasma Arc Gasification

- Heating method that can be used in gasification and pyrolysis, very high temperatures (3,800ºC) are used to break up the molecular structure.
- A large amount of electricity is required for the operation.
- Residual waste must be pre-processed before treatment.

Autoclaving

- Also referred to as Mechanical Heat Treatment (MHT).
- Residual waste is subjected to high temperatures under high pressure steam to kill bacteria and pathogens that might be present.
- RDF produced can also be used in energy generation.
- A degree of pre-treatment is required.
- Significant amounts of energy are required to supply the steam required for autoclaving

Mechanical Biological Treatment (MBT)

- Generic term for the integration of several processes including materials recovery, composting and anaerobic digestion.
- The mechanical element of the process can involve the sorting of waste, the shredding and homogenising of waste into smaller particle sizes suitable for separation processed.
- The biological element of MBT can involve aerobic bio-drying, partial composting, aerobic in vessel composting or anaerobic digestion.
- The outputs from the process are recyclables, RDF and a low quality, stabilised 'compost-like' output.

RDF

- Refuse Derived Fuel (RDF) is a material that is produced from waste that has undergone some sort of treatment process, and is intended for use as a fuel.

SRF

- Solid Recovered Fuel (SRF) is a fuel produced from non-hazardous waste in compliance with the European standard EN 15359. EN 15359 requires that a producer specifies and classifies its SRF by detailing its net calorific value, and chlorine and mercury content of the fuel. Specification includes several other properties, such as the content of all heavy metals mentioned in the Industrial Emissions Directive. Even though this standard means that there is an agreed upon definition of SRF, it is important to note that EN15359 and its underlying standards do not require any specific quality level. The required quality of SRF is therefore defined in each case meaning that SRF quality can vary.

RDF Export

- The market for the export of waste to Europe has developed and grown in the last five years. Data from the Environment Agency in 2014 shows that in June 2010 no RDF was exported. However, up to 2.37 million tonnes of RDF was exported to the continent for incineration from England and Wales in 2014.

- The waste is exported to facilities including those situated in Scandinavia, Germany and Netherlands. The gate fees in such facilities can be offered at a competitive rate however caution must be taken as there are a number of associated costs to be taken into consideration.
- Costs associated with the export of waste include the production of the RDF (preparing, baling and wrapping), transport in the UK to the port, administration and port costs (including the costs of obtaining the relevant licences), sea transport, European land transport and the gate fee at the facility.
- There are European and UK rules governing the export of waste out of the country, regulations apply from the point of loading waste until it has been fully recovered or disposed of at the destination facility.
- Successful export of RDF relies on there being an end market for the produced RDF, failure to secure a market to accept the RDF result is a risk of relying on export. A 2015 report by the Environment Agency highlights that there is uncertainty when projecting the future of the RDF export market. The EU is looking at the better utilisation of existing EfW capacity. If export of waste is encouraged from Eastern Europe to Western European EfW facilities this will impact on the UK's ability to export RDF for disposal. Table 2.1 below shows a number of factors that could impact the availability of the export market.

Table 2.1 - Factors that could impact RDF exports to Europe

Source: Environment Agency (2015) https://www.gov.uk/government/publications/refuse-derived-fuel-exports-rdf-recent-trends

Area of Change	Examples
Demand	- Level of residual waste generation in England. - Level of residual waste generation in key RDF export markets. - Level of residual waste generation in countries that also export RDF to the same markets.
Supply	- New EfW facilities being built in England. - English landfill sites closing. - New EfW facilities being built and old ones being closed in key RDF export markets. - New EfW facilities being built and old ones being closed in countries that export RDF to the same markets as England.
Regulatory and political landscape	- Changes to the landfill tax. - Changes to recycling targets in England and abroad. - Expectations that recycling targets will become more stringent and landfill tax will rise. - Changes in the definition of RDF. - New EU directives on resource efficiency - Changes to support mechanisms for renewable heat and power either in the UK or abroad.

Wider social and economic changes	- Increased recycling and resource efficient behaviour in England and abroad. - Changes in recyclate prices. - Changes in input costs such as freight haulage and fuel rates.

ArrowBio

- A patented separation system which reduces the amount of waste that needs to be sent to landfill. Waste which is largely unsorted is fed into the process, recyclables are extracted and organic waste is broken down by the Anaerobic Digestion process resulting in the production of biogas and electricity.
- The only plant currently operational is a 70,000 tonnes per annum plant in Tel Aviv which has been operational since 2003.
- The technology is undergoing a major upgrade and is unproven at a larger scale. In order to deal with all of Hertfordshire's waste four or five facilities would be needed, or if the facility was to be scaled up, a site approximately four times the proposal of Rye House would be required.

Ramboll (Council's Technical Advisor's) EfW Comparison

Background

To make the right technology choice it is important to look at the key criteria as the facility will be operated for many years, needing to provide a reliable and robust service.

In the current climate a number of other criteria must be addressed. These include:

- Energy efficiency and recovery;
- Environment – emissions, health and safety;
- Flexibility to handle variations in waste composition;
- Fit within the local infrastructure and plans for the future; and
- Ability to operate on a large commercial scale.

Technical Options

The technical options that are considered include:

- Advanced moving grate technology (the RPP);
- Pyrolysis;
- Gasification; and
- Two stage combustion.

Advanced moving grate technology has evolved over many years. Research and even further development of this technology continues today. Its performance has made

significant steps over the last 10 years to achieve very high levels of reliability and high efficiency, especially when combined with a district heating scheme. The technology can meet and exceed strict regulatory limits on emissions and yet it offers the flexibility to accept waste of varying composition and calorific value. Examples of this technology can be found across the globe and many new advanced moving grate plants are under construction and at the design stage today. Technology suppliers continue to expend a considerable research and development (R & D) budget to keep this technology at the cutting edge of efficiency, performance and reliability.

The gasification and pyrolysis technologies are commonly referred to as 'advanced' thermal treatment technologies. The reason being that thermal gasification processes produce syngas, which can potentially be used to produce electricity with higher efficiency or for producing liquid fuels or chemicals. Syngas has about half the energy density of natural gas. Syngas is used in a boiler or other device for power production. Therefore, the main question is whether the additional technical complexity and increased energy consumption of the gasification processes can be justified by the potential increase in efficiency and/or attractiveness of the by-products when compared to conventional combustion.

Thermal gasification of municipal solid waste (MSW) has experienced around 25 years of often challenging development. These alternative technologies generally require MSW to undergo extensive pre-processing. In addition, operational experience is sparse, availability has been shown to be significantly lower than that of modern advanced moving grate plants, and operational costs are higher.

Furthermore, the operational data from reference facilities shows that the overall energy efficiency of thermal gasification processes are less efficient than direct combustion plants.

Two stage combustion technologies have a number of reference plants. Some facilities have been in operation for circa 10 years. Most of the facilities are designed with relatively low steam parameters, thus achieving lower energy efficiency. Furthermore, pre-treatment of waste is required and plants may experience lower availability when compared to modern advanced moving grate fired plants.

Whilst a number of alternative technologies are actively promoted by development companies, there is little evidence to suggest they have achieved sufficient track records and performance levels required to meet the aims of HCC for (i) safe and secure residual waste treatment (ii) combined with ability to deliver high service availability and (iii) high levels of consistent energy production into a local energy network.

The commercial and stakeholder relationship consequences of service failure or short comings at a municipal scale are significant for any waste management authority. On this basis, Ramboll recommends the use of well proven advanced moving grate combustion.

Table 2.2 provides a general comparison of the different thermal treatment technologies.

Table 2.2 – Comparison of technologies

Parameter	Adavanced Moving Grate	Thermal Gasification / Pyrolysis	Two Stage Combustion
Waste requirements • Pre sorting • Size reduction	Not required Only items > 1000 mm	Removal of metals Shredding required	Removal of metals Shredding required
Energy* • Gross electricty • Net electricity • CHP mode ** of lower calorific value*	25 – 33% 22 - 30% Up to 100%	Limited data 0 – 10% Up to 100%	Limited data * Limited data ** Up to 97% *in theory close to avanced grate technology , if material and design are adjusted/changed to handle higher steam parameters. ** loss of additional 2-3% points compared to advanced moving grate due to pretreatment.
Environment • Bottom ash (depends on ash in waste) • Health and safety Compliance with EU regulation	≈ 16-20% by weight Minimal contact with waste Yes	≈ 16-20%* by weight Contact with waste during cleaning of pre-treatment plant Yes * Pyrolysis results in the production of a char. A Defra report classifies municipal solid waste pyrolysis char as *"Hazardous waste, but could be used as coal*	≈ 16-20% by weight Contact with waste during cleaning of pre-treatment plant Yes

Parameter	Adavanced Moving Grate	Thermal Gasification / Pyrolysis	Two Stage Combustion
		replacement in certain combustion applications or as a gasifier feedstock."	
Operation experience Information level Handling changes in waste composition Annual availability Net electricity production at 10 MJ/kg	Well documented Higher flexibility ≥8,000 hrs 0.6 - 0.65 MWh/t	Limited data available Lower flexibility <5,500 hrs 0 – 0.25 MWh/t	Limited data available Medium flexibility <7,000 hrs 0.4 - 0.45 MWh/t
Technical risks Overall assessment Proven treating MSW or MSW derived waste Number of plants	Low Well proven >1,500	High Well proven in Japan. (with very limited net electricity production) Unclear, around 50 to 80 facilities	Medium Further demonstration of track record still required from independently owned plants. Less than 10 facilities (with lower steam parameters and mainly 'heat only' plants.)
Advantages	- Well proven - High availability - High efficiency	- Facilities could apply for renewables benefits (previously double ROCs) - Better public perception in the UK	- Facilities could apply for renewables benefits (previously double ROCs - Potentially better public perception in the UK
Disadvantages	- Limited access to renewables benefits from government - Less positive public perception in the UK	- Low net efficiency - Availability uncertain - Unproven technology to produce syngas for use in gas turbine or upgrade to fuel	No reference plants achieve steam parameters or/and availability similar to facilities based on advanced moving grate technology.

Parameter	Adavanced Moving Grate	Thermal Gasification / Pyrolysis	Two Stage Combustion
Number of modules for a large scale thermal waste treatment facility e.g. 320,000 tpa	2 lines of 20 t/h	Circa 40+ modules of 1 t/h, could base design on around 8 to 10 larger capacity units.	Circa 8 lines of 5 t/h

Appendix 3 – Adherence to Local and National Policy and legislation

Policy and legislation relating to waste management is diverse ranging from EU directives, which require transposition into national legislation, to national plans, strategies and laws that consider specific areas such as waste prevention.

The general thrust of law and strategy in this area is one which aims to create a society that concentrates on prevention, reuse, recycling and energy recovery based on the notion that waste is a resource especially under the context of the circular economy.

The following summary is an overview of the main legislative context under which waste management services have been / are provided. The appendix is not intended to be exhaustive but rather concentrates on areas that have strategic relevance to the RPP proposals.

The (revised) Waste Framework Directive (WFD)

A guiding principle of both European and national waste management is the concept of the waste hierarchy. In general terms the hierarchy identifies that the best way to manage waste is not to generate it in the first place (prevention), followed by reusing and then recycling / composting and recovering energy where practicable. Generally the disposal of waste to landfill is considered to be the least preferable option.

The revised WFD amended the waste hierarchy as shown below :-

The revised hierarchy draws a distinction between the reuse of materials which do not require preparation and those which do. It also confirms that waste to energy processes

are preferential to landfill especially when considered under the context of carbon reduction requirements.

The WFD originally provided guidance on the effective management of wastes throughout the EU. It was and remains one of the main European legislative drivers requiring the production of national strategies to encourage waste prevention and reuse along with appropriate recovery and disposal technologies supported by regulatory frameworks that protect the environment and public health.

The EU adopted a revised WFD on the 12th December 2008 which was subsequently transposed into UK law. Significant updates in the revised WFD include targets as noted below:

- recycling 50% of household waste by 2020.
- recycling and / or reusing 70% of non-hazardous construction and demolition waste by 2020.
- separate collections for paper, metal, plastic and glass by January 2015
- Implementation of waste prevention programmes by December 2013.

(revised) Waste Framework Directive - targets

The revised Waste Framework Directive (rWFD) sets a household recycling target for member states of 50% by 2020. This is reflected in a similar national target versus the HWP Joint Municipal Waste Management Strategy that set a 50% target by March 2013.

Whilst the Hertfordshire Waste Partnership (HWP) achieved 50% recycling by March 2012 subsequent issues with non-compostables in the organic waste stream saw recycling drop to 45.5% in 2012/13 before climbing to 49.3% in 2013/14 and 49.4% in 2014/15.

It should be remembered that EU targets are national level targets with Member states free to decide how such targets are translated into national law. The response in Northern Ireland, Scotland and Wales has been to set statutory targets for local authorities designed to exceed the 50% target by 2020. However, considering that over 80% of the tonnage relevant to the UK target arises in England, based on current trajectories, the UK as a whole is required to significantly improve from its current 'flat-lining' position to achieve 50% by 2020.

The situation is compounded by the fact that English local authorities have not had statutory targets since 2007/08. This was highlighted by a House of Commons

Environment, Food & Rural Affairs Committee report into the state of waste management in England. In assessing barriers to achieving 50% recycling by 2020 the report raises the prospect of reintroducing statutory targets for local authorities and noted that fiscal pressures on local authorities could lead to changes such as charged green garden waste services which could negatively affect the rates achieved.

An additional and important aspect of the Directive is the distinction adopted between low efficiency and high efficiency incineration technology leading to the former being categorised as Disposal (in Waste hierarchy terms) and the latter as recovery. The criteria set out in the Directive apply an R1 calculation threshold of 0.65 efficiency for achievement of recovery status (R1).

The RPP Facility would be operated in accordance with regulatory requirements relating to protection of human health and the environment and the proposals have been designed to exceed the R1 threshold and be configured to meet recovery status under this definition.

The National Waste Strategy 2007 / The Defra Waste Review 2011

The national waste strategy was last properly revised in 2007 with new national recycling targets set at 40% by 2010 and 50% by 2020 in line with the European 50% recycling target also to be achieved by 2020.

However, since then despite the Government undertaking a waste policy review in 2011, other than the removal of statutory targets for English local authorities as well as the impact of on-going austerity measures, no fundamental changes have been made to national policy that significantly impact local waste management services.

EU Circular Economy Strategy

A circular economy is an alternative to a traditional 'linear' economy (i.e. make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.

Published on 2nd December 2015, the Strategy aims to transform Europe into a more competitive resource-efficient economy, addressing a range of economic sectors, including waste.

The new strategy set out in its EU Action Plan for the Circular Economy and accompanying Annex, includes a proposal to impose legally binding targets on most member states to recycle 65% of all municipal waste by 2030 (the previous target for 2020 as above was 50%). Currently the UK has a recycling rate of around 44% and is already struggling to meet the current target. The Government are concerned that this will impose significant burdens on the UK and are also concerned that some poor performing Member States will be exempt from the targets whilst the UK and others will face heavy fines for failure to achieve the targets. The UK Government have also pushed for clarity over the inclusion of IBA reprocessing as a contributor to recycling rates.

The key provisions of the Strategy are as follows;

- A common EU target for recycling 65% of municipal waste by 2030;
- A common EU target for recycling 75% of packaging waste by 2030;
- A binding landfill target to reduce landfill to maximum of 10% of all waste by 2030;
- A ban on landfilling of separately collected waste;
- Promotion of economic instruments to discourage landfilling;
- Simplified and improved definitions and harmonised calculation methods for recycling rates throughout the EU;
- Concrete measures to promote re-use and stimulate industrial symbiosis - turning one industry's by-product into another industry's raw material;
- Economic incentives for producers to put greener products on the market and support recovery and recycling schemes (e.g. for packaging, batteries, electric and electronic equipment, vehicles).

In order to achieve a 65% recycling target, Hertfordshire authorities, through the Hertfordshire Waste Partnership (HWP), would need to ‘capture’ significant amounts of material currently within the residual waste stream. The size of the challenge would require the following list of issues to be considered:

- Weekly recycling – perhaps one of the last significant operational changes still available across the UK is to increase kerbside recycling to a weekly service to prioritise efforts to divert waste from landfill.
- Reductions in residual waste capacity – working in concert with weekly recycling waste collection authorities could consider further reductions in residual waste capacity either through reducing bin sizes in line with the approaches in North Herts and Three Rivers or through further frequency reductions as implemented elsewhere in the UK.

- Weekly food waste collections – recent waste compositional analysis indicates that food waste continues to make up approximately 30% of the residual waste bin. If this fraction could be effectively captured it could make one of the biggest contributions to closing the gap between current performance and 65% recycling by 2030.
- Trade Waste Recycling – the separate collection requirements introduced by the revised Waste Framework Directive, which applied from January 2015 onwards, are equally applicable for the collection of trade waste. The clear intention is that all trade waste service providers should now be providing recycling services. That said the overall level of trade waste handled by Hertfordshire authorities is minimal and therefore any recycling extracted from this waste stream is unlikely to make a significant contribution to meeting future targets.
- Legislative tools – to support such efforts waste authorities will need to consider whether the current suite of legislative tools available are sufficient or whether additional powers such as being able to ban food waste from residual waste bins is needed.
- WasteAware – an important part of any future service in Hertfordshire will be the continued and enhanced promotion of services that support efforts to prevent, reduce and recycle on the part of residents and local businesses.

The Landfill Directive

The overall aim of the Directive is to prevent or reduce as far as possible negative effects on the environment, in particular the pollution of surface water, groundwater, soil and air. Globally this includes addressing the greenhouse effect, as well as any resulting risk to human health, from the landfilling of waste during the whole life-cycle of the landfill.

The Directive defines the different categories of waste (municipal waste, hazardous waste, non-hazardous waste and inert waste) which applies to all landfills defined as waste disposal sites for the deposit of waste onto or into land.

More fundamentally the Directive sets targets for the reduction of biodegradable municipal wastes (BMW) sent to landfill. Transposition of the Directive into UK law took advantage of a 4 year derogation available to a number of member states with historic reliance on landfill. The relevant targets for the UK were / are to have reduced the amount of BMW going to landfill by :-

- 75% of that produced in 1995 by 2010
- 50% of that produced in 1995 by 2013
- 35% of that produced in 1995 by 2020

The Waste Emissions & Trading Act 2003 / Landfill Allowance Trading Scheme

In order to give practical expression to the requirements of the Landfill Directive in 2003 the Government instituted the Waste Emissions Trading Act. This introduced a system of tradable allowances linked to the tonnage of residual waste landfilled by local authorities.

The Act required progressive reductions in the amount of BMW sent to landfill. In doing so it made a strong link between the role that waste management has to play in contributing to the wider climate change agenda with reductions in BMW analogous with reductions in CO^2 emissions.

The level of annual allowances were reduced each year to ensure compliance in targets years. The original intention was that those authorities with excess allowances, i.e. as a result of intensive reduction, recycling and energy recovery strategies, would be able to sell excess allowances to those authorities that either had not been able or had chosen not to achieve the required landfill diversion. The idea was tradable allowances would allow the UK to achieve compliance with Directive targets at minimum cost. This became known as the Landfill Allowance Trading Scheme (LATS).

In practice the 'futures market' envisaged by LATS never materialised as by definition it made the false assumption that a number of authorities would base their strategy on purchasing additional allowances from those that had excess to sell. The key driver became the increases in landfill tax which soon overtook LATS as the principle force behind landfill diversion.

Landfill tax has the added advantage of applying equally to commercial wastes for which there never was a LATS equivalent. In addition potential penalties of £150 per tonne for non-compliance not only undermined the tradable intention behind LATS but also motivated most waste disposal authorities and unitaries to pursue landfill reduction in line with the Landfill Directive and wider rWFD thereby undermining future demand for excess allowances.

Waste (England and Wales) (Amendment) Regulations 2012

The regulations require that separate collections must be deemed to be practical in each of the assessment areas, i.e. technically, environmentally and economically. If separate collections fail in any one of these areas then they are not required.

Based on the TEEP tests conducted across the country so far it would appear that whilst technical practicality does not present any issues the majority of the time

economically practicality cannot be established when aspects such as vehicle costs are taken into account, i.e. greater income through keeping materials separate does not usually compensate for higher collection costs. A situation exacerbated by recent significant falls in prices for a number of recyclates.

In addition it should be considered that fully commingled collections also tend to outperform kerbside sort in terms of tonnage capture reflecting their ease for residents. Therefore even taking into account higher contamination levels, it is increasingly being argued that separate collections also fail the environmental practicability test as a result of diverting less material from landfill whilst using additional vehicle resources.

The Packaging Directive / The Producer Responsibility (Packaging Waste) Regulations 2007

The Packaging Directive and associated regulations established statutory recycling / recovery targets for organisations involved in the packaging supply chain. The legislation is an example of the 'producer responsibility principle' and is aimed at ensuring that businesses take responsibility for the products they have placed on the market once those products have reached the end of their life.

In the UK companies or groups of companies who have a turnover exceeding £2 million and who handle more than 50 tonnes of packaging are required to comply. They must recycle or reuse a calculated percentage of their packaging. Such activity is evidenced through the Packaging Waste Recovery Note (PRN) system and its export equivalent the Packaging Export Recovery Note or PERN. These are bought from reprocessors with the money intended for re-investment in the 'recycling process'.

The regulations also require that producers of packaging adhere to 'essential requirements' guidance, by for example not over-packaging products beyond the needs of product transportation, protection, and health and safety.

Whilst there are no direct implications for local authorities it had originally been envisaged that the PRN system would result in higher prices which would 'pull' material through the municipal waste stream and up the hierarchy.

However, in practice the degree of transparency intended has not been reflected in prices paid to local authorities. In addition recent changes to a number of material specific targets have resulted in a sharp decline in the value of the associated PRN resulting in downward pressure on prices.

The WEEE Directive

The Waste Electrical and Electronic Equipment (WEEE) Directive became law in the UK in January 2007 and established national recycling targets for waste electrical and electronic equipment initially set at 4kg per household. By 2011 the target was comfortably being achieved by the UK with 34% of the tonnage placed into the market recycled.

As a further example of producer responsibility legislation the WEEE Directive and its transposition into UK law places no additional burden on local authorities. However, mindful of the fundamental role local government has in the management of household waste, local authorities have been encouraged to register Household Waste Recycling Centres (HWRCs) as Designated Collection Facilities, to allow for the receipt of waste electrical equipment. The collection network is supported by the Distributor Take-back Scheme (DTS).

The funding of separate collection activity at HWRCs is from the DTS and the costs of transporting, recycling and recovering WEEE is borne by the producers of the equipment. This has saved Hertfordshire's tax payers significant amounts since the legislation was implemented.

The WEEE Directive was recast in 2012, with new targets coming into force in February 2014. This includes a target of recycling 45% of every 100 tonnes of equipment placed on the market by 2016 rising to 65% in 2019.

The recast also sees retailers of electrical items whose shop space covers at least 400m^2 required to provide facilities for customers to return small WEEE free of charge. There will also be tougher restrictions on the export of WEEE, to prevent waste electricals from being processed in countries where conditions are hazardous to workers and the environment. The measures see exporters made responsible for proving that goods are being shipped abroad for repair or reuse.

Waste Minimisation Act 1998

The Waste Minimisation Act 1998 enables local authorities to take steps to minimise the generation of household, commercial or industrial waste. The Act gives recognition to the fact that local authorities also have responsibilities to promote and encourage waste minimisation through a range of direct and indirect measures.

In essence the Act provides a general power to local authorities to do anything which in their reasonable opinion is necessary or expedient for the purpose of minimising the quantities of controlled waste generated in its area.

However, at the same time the Act does not place any automatic duty to undertake or facilitate such activity, nor does it allow local authorities to impose any requirements on businesses or householders in the area.

Sector commentary since the Act was introduced suggests that 'well-being powers' also provide appropriate authorisation for waste minimisation activity.

Clean Neighbourhoods & Environment Act 2005

The Clean Neighbourhoods & Environment Act became law in April 2005 and contains a range of measures to improve the quality of the local environment by giving local authorities and the Environment Agency (EA) additional powers to fine those responsible for fly tipping and litter.

Other measures in the legislation give the EA powers to issue fixed penalty notices to businesses that fail to produce waste transfer notes; waste carriers that fail to produce registration details or evidence of exemptions. It also revamps procedures for the search and seizure of vehicles suspected in the pursuit of illegal waste activities through making it easier for courts to require forfeiture of such vehicles.

Climate Change Act 2008

The Climate Change Act received Royal Assent in November 2008. At the time the primary matter of significance was the power created by the Act for the introduction of pilot waste incentive schemes whereby selected local authorities would have been allowed to trial various measures to motivate greater participation in recycling services including charging for residual waste. The legislation also gave the government powers to force retailers to charge for using single use carrier bags.

However, no local authority ever implemented a charging scheme for residual waste with the former coalition government subsequently removing the power to do so.

With respect to the wider environmental agenda the Climate Change Act legally commits the UK to meeting its 80% carbon reduction target by 2050. This was supported by the 2008 Energy Bill, which was also passed into law at the same time, resulting in 'feed in tariffs' for small-scale renewable energy projects.

Longer term carbon reduction commitments will keep under review how changes in UK waste management practice can contribute. This in turn could result in future legislation that looks to prioritise the management of certain waste streams to support various technologies e.g. separate food waste collections to support the development of anaerobic digestion as part of the renewable energy strategy.

Industrial Emissions Directive (IED)

This Directive (which is designed to offer a high level of protection for the environment and human health while simplifying the existing legislation and cutting unnecessary administrative costs), brings together Directive 2008/1/EC (the 'IPPC Directive') and six other directives into a single directive on industrial emissions. The IED supersedes the Waste Incineration Directive (WID) (2000/76/EC) but adopts similar requirements.

It covers industrial activities with a major pollution potential, defined in Annex I to the Directive (energy industries, production and processing of metals, mineral industry, chemical industry, waste management, rearing of animals, etc.).

It also contains special provisions for the following installations:

- combustion plants (≥ 50 MW);
- waste incineration or co-incineration plants;
- certain installations and activities using organic solvents;
- installations producing titanium dioxide.

It requires that any industrial installation which carries out the activities listed in Annex I to the Directive must meet certain basic obligations to ensure that:

- preventive measures are taken against pollution;
- the best available techniques (BAT) are applied;
- no significant pollution is caused;
- waste is reduced, recycled or disposed of in the manner which creates least pollution;
- energy efficiency is maximised;
- accidents are prevented and their impact limited;
- sites are remediated when the activities come to an end.

Thematic Strategy on Waste Prevention and Recycling

In 2005, the European Commission proposed a new strategy on the prevention and recycling of Waste. This strategy is one of the seven thematic strategies programmed by the 6th Environmental Action Plan.

This long-term strategy aims to help Europe become a 'recycling society' that seeks to avoid Waste and uses Waste as a resource. It will draw on the knowledge that the thematic strategy on resources will generate.

The main actions of the thematic strategy are:

- a renewed emphasis on full implementation of existing Legislation;
- simplification and modernisation of existing Legislation (e.g. firstly an amendment of the Waste Framework Directive merging it with the Hazardous Waste Directives and introducing life cycle thinking, which has now been successfully carried out);
- introduction of life-cycle thinking into Waste policy;
- promotion of more ambitious Waste prevention policies by clarifying Member States' obligations to develop publicly available waste prevention programmes;
- better knowledge and information which will underpin the continued development of Waste prevention policy; and
- development of common reference standards for recycling.

EU Directive on Environmental Impact Assessment

On 12 March 2014, the European Parliament voted to adopt substantive amendments to the Environmental Impact Assessment ("EIA") Directive 2011/92/EU. These amendments made by EIA Directive 2014/52/EU will not be transposed into UK legislation until 2017. It is anticipated that the UK Government will issue amended EIA Regulations in the next 12 -18 months to allow sufficient consultation prior to the 2017 deadline. The Revisions seek to address the following:

- considering how climate change, human health and resource efficiency can be assessed more effectively within EIA;
- enhancing the approach taken by developers to pre-assess proposals to enable a screening decision to be made;
- improving, potentially, the quality of the writing and review of environmental statements, by ensuring those who undertake the work have competent expertise to do so;

- considering how efficient and effective monitoring strategies can be created to track the delivery and success of design elements and mitigation that aims to avoid, prevent or reduce significant adverse effects on the environment; and
- introducing penalties for infringements.

Given the programmed planning determination date for the facility in the event of RPP acceptance and planning approval, it is not expected that the provisions of the Directive will have been fully transposed into UK legislation. Nevertheless, in preparing the EIA to accompany the planning application, the Contractor will have to give regard to the provisions of the Directive in order that the potential risk of legal challenge might be minimised.

National Planning and Permitting Regulations

The key regulations in England and Wales that are applicable to the Facility comprise:

- Environmental Permitting (EP) Amendment Regulations 2015;
- Town and Country Planning (Environmental Impact Assessment Regulations 2011;
- Waste Incineration (England and Wales) Regulations 2002;
- Waste and Emissions Trading Act 2003 (amendments etc) 2013 and the Landfill Allowance Trading Scheme (LATS);
- Water Resources Act 1991 (as amended 2009);
- Various Habitats and Species Conservation Regulations/Acts;
- Air Quality Standards Regulations 2010; and
- Environmental Protection Act (EPA) 1990.

The Contractor will need to appropriately address these matters during any planning application.

Appendix 4 – Assessment on Need and proposed Facility capacity

Existing arrangements

In 2009, the Council sought tenders for the provision of interim waste treatment and associated final disposal facilities for residual LACW arising in Hertfordshire. This was in order to ensure that arrangements were in place that could lead to a transition into the planned delivery of the New Barnfield facility.

The contracts were set for a period of c. 4 years from either January or March 2010 with a natural expiry date for all arrangements on 31 March 2014 but with the possibility of three, one year, extension periods at the sole discretion of the Council.

Officer's considered the relative merits of extending the 2010 Interim contract arrangements, and decided that, albeit there were some advantages in extending the existing contracts, e.g. surety of disposal arrangements and a higher level of certainty on the budgetary requirements, there was planned and ongoing development of facilities in the region and surrounding counties that warranted a fresh approach to the market. A new second 'suite' of interim contracts for the period 2014 to 2018, with extension periods of up to three years was sought.

It was also agreed that the 1997 contract with LondonWaste Ltd for disposal of 60k tonnes p.a at the Edmonton EcoPark, due to expire 31st December 2017, would be continued for the remaining period. The 2010 contract with LondonWaste for disposal of 5k tonnes p.a. would be extended beyond the 31st March 2014 natural expiry date for up to the maximum permitted three year extension period.

The remaining tonnage of residual LACW was the subject of an OJEU notice published on the 12 August 2013, leading to contract commencement on the 1 April 2014. These 2014 interim contracts have a natural expiry of March 2018 with the potential to extend the contracts up to March 2021.

The estimated future projected use of these interim disposal contracts for disposal of residual LACW (in tonnes) is set out below through to natural expiry (in broad terms and without growth assumptions) to the end of the 2017/18 financial year.

Table 4.1 – Projected use of 2014 Interim disposal contracts				
Facility	**Contracted operator**	**2015/16**	**2016/17**	**2017/18**
Edmonton EfW (1997 contract)	LondonWaste Ltd	60,000	60,000	45,000
Edmonton EfW (2010 contract)	LondonWaste Ltd	5,000	5,000	0
Bletchley Landfill / Greatmoor EfW (Buckinghamshire)	FCC	60,000	78,000	93,000
Ardley EfW (Oxfordshire)	Viridor	90,000	75,000	75,000
Westmill Landfill (Hertfordshire)	Biffa	40,000	40,000	45,000
Milton Landfill (Cambridgshire)	FCC	3,000	0	0
Residual Waste Total		**258,000**	**258,000**	**258,000**

Financial pressure

As can be seen, the continued export of residual waste out of county and associated haulage costs create additional pressure on the Council's budget. This, and the expiry of the most cost effective services at Edmonton are reflected as additional pressures in the Council's Integrated Plan as follows:-

Table 4.2 – Budget pressures				
(£1,000's)	2016/17	2017/18	2018/19	2019/20
Landfill tax (inflation)	156	319	497	685
Recycling Credits payments	129	261	399	542
Edmonton cessation	0	648	2,527	2,527
Interim waste contracts	0	408	2,311	2,703
Materials reduction (quantity)	50	50	50	50
TOTAL	**335**	**1,686**	**5,784**	**6,507**

It is advantageous to provide certainty and value for money for the future and the continued reliance on transporting waste increasing distances is unsustainable and uncertain.

Further detail on sensitive financial information is detailed in the Part II annex to this report.

The last remaining significant disposal point in Hertfordshire (the Westmill landfill site near Ware) is currently the subject of an application to extend the time for quarrying extraction activity with an associated landfill and restoration delay. At the time of writing, the worst case scenario is that an extension to time is not permitted meaning the Westmill landfill site will be unavailable from December 2017, the best case from the WDAs perspective is that the time extension is granted giving local delivery points for eastern areas of the county to circa 2025.

As at section 11.8 of the report, it is stated that projections on waste growth must be considered in respect of service changes at the kerbside or at the network of household waste recycling centres.

It was the case that, despite 7 of the 10 WCAs making significant changes during 2013/14 (the removal of cardboard from the organic waste stream into the dry recycling service) and changes to the receptacle size of the residual waste container in North Herts, the level of residual waste growth reduced only slightly (from 2012/13) by -0.93%.

If the major residual service changes at North Herts (reduced receptacle size -16.07% reduction) and Watford (private trade service arrangements -6.06% reduction) are discounted, the remaining 8 of the 10 districts show residual LACW growth of +1.81%.

Likewise, analysis of the residual LACW growth between 2013/14 and 2014/15 is, without consideration of service changes, a -0.67% reduction. However, taking into consideration the changes for separate food waste services in Dacorum and Three Rivers part way through the year and the full year effect of the previous year's changes in North Herts and Watford, the remaining 6 WCAs demonstrated waste growth of +0.98%.

Changes at the kerbside continued into 2014/15 with further changes in 2015/16 (which have been taken into account in the waste flow projections). Analysis of the kerbside collections of residual waste for the first 3 quarters of 2015/16 in comparison to the same period in 2014/15 is shown below in *Figure 4.3*

This shows that, in the main, where changes have been made (such as the third quarter in Broxbourne or the whole period in Dacorum), significant improvements in reducing the volume of residual waste have been made, such that, the total collection authority residual waste remains at similar levels to the same period the previous year.

Whilst it is not surprising that improvements have been made given the nature of the service changes, it should be noted that, as was the case between 2013/14 and 2014/15, where service changes have not been implemented in the period, the remaining volumes show an increase in residual LACW growth of 1.72%.

Figure 4.3: Changes in Waste Collection Authority residual LACW (quarters 1 to 3) 2014/15 to 2015/16				
	Quarters 1 to 3 2014/15	**Quarters 1 to 3 2015/16**	**Difference**	**Percentage change**
	Tonnage	Tonnage	Tonnage	Tonnage
Broxbourne	19,076.11	18,856.58	-219.53	-1.15%
Dacorum	24,461.78	22,339.02	-2,122.76	-8.68%
East Herts	21,728.74	22,649.50	920.76	4.24%
Hertsmere	18,119.90	18,472.20	352.30	1.94%
North Herts	17,035.43	17,675.70	640.27	3.76%
St Albans	19,018.02	19,119.97	101.95	0.54%
Stevenage	15,991.76	15,756.74	-235.02	-1.47%
Three Rivers	10,914.75	11,272.26	357.51	3.28%
Watford	14,086.90	14,390.30	303.40	2.15%
Welwyn	17,891.71	17,770.09	-121.62	-0.68%
Total	**178,325.10**	**178,302.36**	**-22.74**	**-0.01%**

Other Authorities

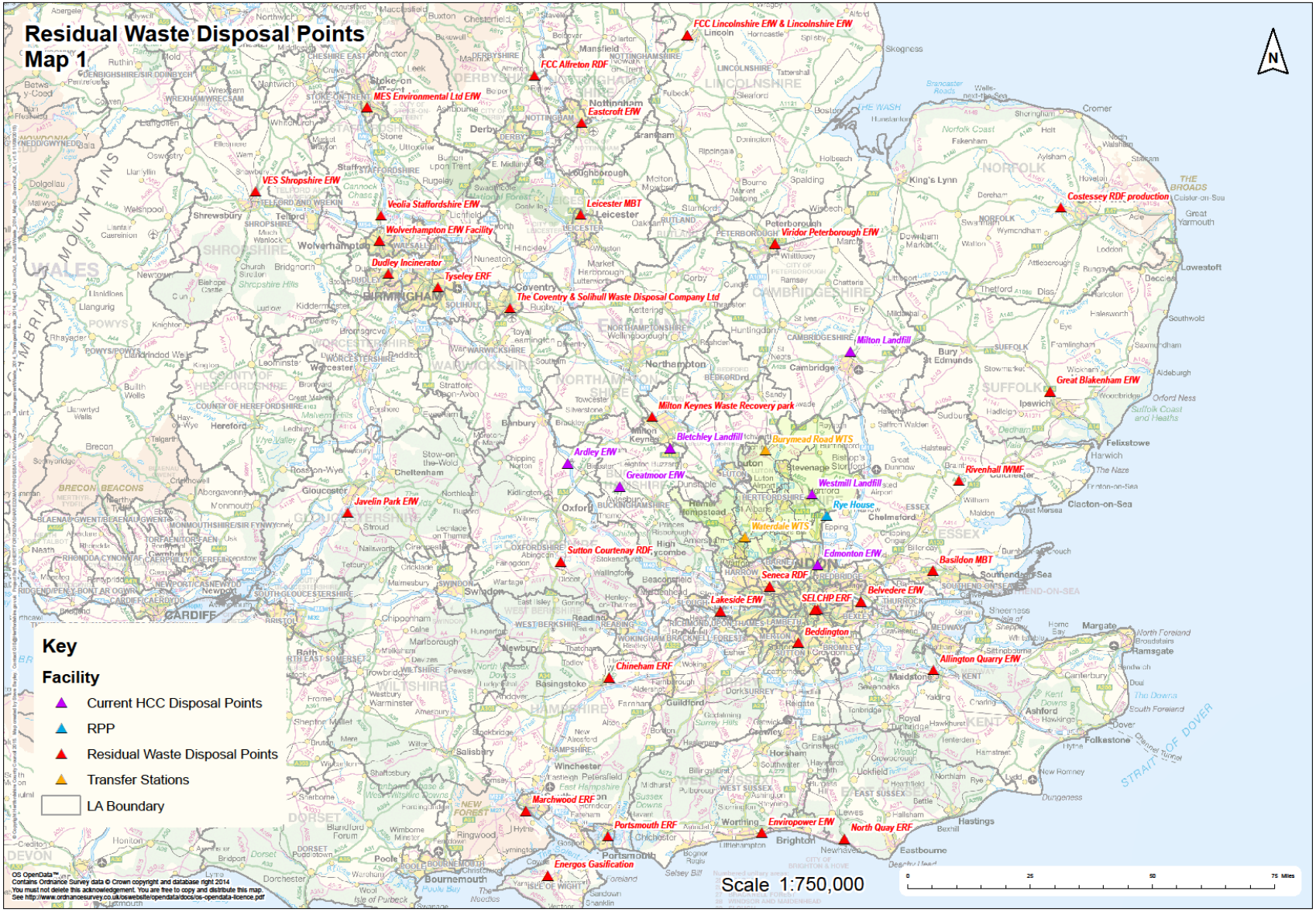
To provide some context for residual LACW solutions elsewhere in the UK, table 4.4 shows the residual waste disposal options for Hertfordshire County Council's nearest statistical neighbours, these authorities have the most similar statistical characteristics in terms of social and economic features. (Source: Cipfa (Charted Institute of Public Finance and Accountancy)

http://www.cipfastats.net/resources/nearestneighbours/profile.asp?view=select&dataset=england)

Table 4.4: Residual LACW disposal in other authorities (source Defra statistics 2014/15)			
Authority	**Residual disposal solution**	**2014/15 residual LACW (tonnes)**	**2014/15 % LACW recycled/ composted/ re-used**
Buckinghamshire County Council	In county Energy from Waste (EfW) facility constructed at Greatmoor entered commissioning late 2015, anticipated to be fully operational from spring 2016.	123,413	53.1
Cambridgeshire County Council	Waste sent to their Mechanical Biological Treatment (MBT) facility with residual remaining after treatment sent to landfill.	135,226	58.5
Essex County Council	Processed at MBT facility in Basildon, then the resulting 'fuel' is sent for export to European EfW facilities.	372,576	48.1
Gloucestershire County Council	In county Javelin Park EfW, planning application approved by Secretary of State in January 2015.	158,868	46.7
Hampshire County Council	Waste is sent to one of three EfWs within Hampshire with less than 10% of waste sent to landfill.	392,116	40.6
Kent County Council	In county EfW facility at Allington Quarry.	372,065	47.7
Lancashire County Council	Waste treated at two MBT facilities, waste remaining after treatment goes to landfill.	345,087	43.0
Northamptonshire County Council	The county is divided into three areas and waste from each area sent to a number of facilities. Technologies include mechanical treatment, anaerobic digestion, gasification, production of waste derived fuel and MBT.	183,861	48.5
Nottinghamshire County Council	Following unsuccessful planning application for an EfW, an RPP was accepted, waste now sent to a combination of existing EfWs including facilities out of county.	224,193	43.9

Oxfordshire County Council	Waste is sent to their in county EfW facility at Ardley.	128,841	58.6
Suffolk County Council	In county EfW facility is operational at Great Blakenham	186,169	51.7
Surrey County Council	Following a refusal of planning permission for EfWs at a number of in county sites interim contracts were signed in 2009 to take waste out of the county.	262,187	54.2
Warwickshire County Council	Within county landfill and EfW at Four Ashes (in partnership with Staffordshire County Council).	122,669	55.0
West Sussex County Council	Waste is to be treated at their MBT facility (currently completing the commissioning phase) and waste derived fuel to be produced.	250,572	43.7
Worcestershire County Council	In partnership with Herefordshire entered a contract in 1998, following failed planning application on the original site, the in county site at Hartlebury was granted planning permission by the Secretary of State in 2012. EfW facility is under construction and will start commissioning in spring 2017.	163,628	43.3
Hertfordshire (for comparative purposes)		274,727	48.7

Map 1 highlights the existing and emerging facilities surrounding Hertfordshire.


Residual Waste Disposal Points
Map 1
Key
Facility
Current HCC Disposal Points
RPP
Residual Waste Disposal Points
Transfer Stations
LA Boundary
FCC Lincolnshire EfW & Lincolnshire EfW
FCC Alfreton RDF
MES Environmental Ltd EfW
Nottingham Eastcroft EfW
VES Shropshire EfW
Veolia Staffordshire EfW
Wolverhampton EfW Facility
Leicester MBT
Costessey RDF production
Viridor Peterborough EfW
Dudley Incinerator
Tyseley ERF
The Coventry & Solihull Waste Disposal Company Ltd
Milton Landfill
Great Blakenham EfW
Milton Keynes Waste Recovery park
Bletchley Landfill
Burymead Road WTS
Ardley EfW
Greatmoor EfW
Rivenhall IWMF
Westmill Landfill
Javelin Park EfW
Rye House
Waterdale WTS
Sutton Courtenay RDF
Edmonton EfW
Basildon MBT
Seneca RDF
Belvedere EfW
Lakeside EfW
SELCHP ERF
Beddington
Allington Quarry EfW
Chineham ERF
Marchwood ERF
Portsmouth ERF
Enviropower EfW
North Quay ERF
Energos Gasification
Scale 1:750,000
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GMT Sensitivity testing

In order to test that the RPP presented by VES meets the needs of the Council a number of assumptions have been tested to ensure that, with changes in the waste generated over the life of the Contract such as improvements in recycling, the prospect of a GMT breach is significantly low.

The contractual maximum tonnage is 352,000 tonnes per annum. Should the volume of Contract Waste produced be above this level then VES have the option to accept this additional waste with the cost passing back through to the Council or the Council has the option to make alternative arrangements for this additional waste.

The contractual minimum tonnage (known as the Guaranteed Minimum Tonnage or GMT) has been negotiated and agreed for the RPP to be 135,000 tonnes per annum. The contractual minimum tonnage for New Barnfield was 180,000 tonnes per annum. If the Council fails to provide this volume of waste and send it to the facility under the Contract they would still have to pay up to this GMT tonnage subject to VES providing "substitute waste" or the Council providing "top up" waste as detailed in the main body of the report.

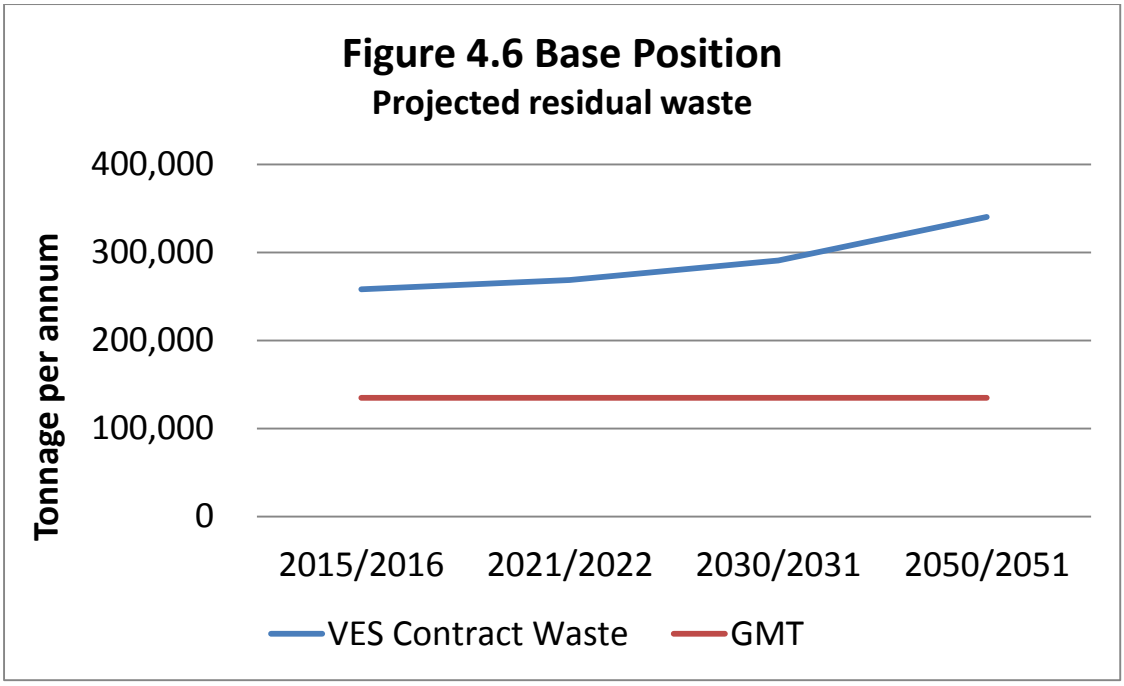
Base Position

A base position has been established and used by the Council for the assessment of the RPP and for establishing the affordability of alternative disposal arrangements. This base position takes into consideration known changes in residual waste in the next three years (for example the introduction of the mechanical street sweepings contract) and projects only growth in the number of household's not economic or other waste growth.

Household growth has been projected forward using adopted and/or projections of the district and borough local plan commitments for housing numbers. The anticipated increase in future dwellings up to 2031 is expected to be in the region of c.87,000.

Table 4.5	**2015/2016**	**2021/2022**	**2030/2031**	**2050/2051**
Projected annual tonnage contract waste	258,361.58	268,571.05	290,836.66	340,315.77
GMT Balance	123,361.58	133,571.05	155,836.66	205,315.77

With the projected volumes of residual waste over the life of the Contract the residual waste does not fall below the Guaranteed Minimum Tonnage (GMT) level set in the Contract.



Assessment of the GMT can also be provided by comparative published positions. As is shown in table 4.7 below, with the exception of Oxfordshire who have negotiated a GMT of zero, the RPP proposes a balanced position between a low GMT (the level having an impact on risk and therefore cost) and being less reliant on third party waste.

It is also interesting to note that the market consultation responses indicate that a significantly higher proportion of the nominal capacity would be required as a GMT which is perhaps a reflection of the existing market in terms of risk transfer or funding as opposed to a few years ago when the comparative facilities would have reached financial close.

Table 4.7: Assessment of GMT against capacity

	Source	**Capacity**	**GMT**	**GMT as a % of facility size**	**LACW residual** (Defra 14/15)	**Reliance on third party waste (%)**
1	Market consultation	500,000	400,000	80.00%	-	-
2	Market consultation	400,000	330,000	82.50%	-	-
3	Market consultation	300,000	260,000	86.67%	-	-
4	Market consultation	250,000	200,000	80.00%	-	-
5	Market consultation	500,000	400,000	80.00%	-	-
6	Buckinghamshire CC	300,000	100,000	33.33%	123,413	58.86%
7	Oxfordshire CC	300,000	-	0.00%	128,841	57.05%
8	Suffolk CC	270,000	170,000	62.96%	186,169	31.05%
9	Norfolk CC (as proposed)	275,000	170,000	61.82%	229,608	16.51%
10	RPP	320,000	135,000	42.19%	274,727	14.15%

Waste Composition Analysis

A waste composition study was commissioned by the Council and carried out over a six week period between March and May 2015 looking at the composition of the kerbside waste of nine of the ten district and borough councils and seven of the seventeen household waste recycling centres in the County.

East Herts district council did not participate in the waste composition analysis but have since carried out their own waste composition study which revealed similar patterns experienced by the other district and borough councils.

The results from the waste composition analysis study have helped inform the testing of the RPP to ensure that it meets the Council's future need and highlighted extracts are as follows:-

Residual Waste

- Households were setting out an average of 6.10kg per household per week.
- 32.8% of the total residual waste was food waste – 43.9% of this was disposed in its packaging.
- 10% of the residual waste was paper items – 63.2% of this was recyclable at the kerbside.
- 2.9% of the residual waste was metallic – 47.6% of this was recyclable at the kerbside.
- 3% of the residual waste was glass – 89.7% of this was due to glass bottles and jars which can be recycled at the kerbside.
- Overall **15.4%** of collected residual waste could have been placed into the mixed dry recycling containers.
- Overall **35.8%** of collected residual waste could have been placed into the organic recycling containers.
- In total **51.2%** of residual waste collected could have been recycled at the kerbside.

Kerbside Mixed Recycling

- 78% of households presented dry recycling containers out for collection.
- Kerbside properties diverted around 25% of their total waste through mixed recycling collections.

Organic Recycling

- 52% of households presented organic recycling containers for collection.
- Kerbside properties diverted around 21.8% of their total waste through organic recycling collections.

Scenario testing

To account for potential future changes in residual LACW a number of different sensitivities have been run. The results are shown in table 4.8.

Scenario 1

This scenario assumes that Hertfordshire County Council could achieve the same recycling rate as Oxfordshire County Council. Oxfordshire County Council have the highest household recycling and composting rate of any waste disposal authority at 60.5%, which equates to a municipal recycling rate of 58.62%. This recycling rate has been applied to Hertfordshire's waste flow.

Scenario 2

This scenario is modelled on **all** food waste being diverted from the residual waste stream. No other changes have been modelled to the base case. As per the waste composition analysis 3.53% of the residual waste received at the HWRC was food waste and 32.81% of the WCA residual kerbside waste was food.

Scenario 3

The scenario modelled here assumes that the 65% recycling rate target is achieved (EU Circular Economy package agreed by the European Commission in December 2015 set a target for recycling municipal waste of 65% by 2030). Although this target is agreed by the European Commission please note that it is still to be agreed by the EU Parliament and Council Ministers.

Scenario 4

Based on a rate of 0.5% in household growth, as referenced in the Eunomia report (Residual Waste Infrastructure Review Issue 9, December 2015), the Hertfordshire projected household growth rate has been removed from the base case and a rate of 0.5% has been applied.

Scenario 5

Scenario 5 has been modelled on the basis that all WCAs can achieve the same reduction in residual waste as the best performer. In this case:-

(i) Three Rivers District Council have the highest recycling rate in Hertfordshire and are considered as the best performing WCA. This scenario has been modelled assuming all WCA's can achieve the same volume of residual waste per household as Three Rivers District Council. This would be a residual bin size of 140l and a separate food waste collection.

(ii) Of the HWRCs that were studied as part of the 2015 Waste Composition Analysis, Rickmansworth HWRC had the lowest percentage of recyclables in

the residual waste. This scenario has been modelled on the assumption that all HWRCs can achieve the same level of recycling as Rickmansworth.

		2015/2016	2021/2022	2030/2031	2050/2051
	GMT	*135,000.00*	*135,000.00*	*135,000.00*	*135,000.00*
	Maximum tonnage	*352,000.00*	*352,000.00*	*352,000.00*	*352,000.00*
HCC Base Position	VES Contract Waste	258,361.58	268,571.05	290,836.66	340,315.77
	GMT Balance	123,361.58	133,571.05	155,836.66	205,315.77
Scenario 1	VES Contract Waste	219,421.76	233,209.81	252,543.83	295,508.31
	GMT Balance	84,421.76	98,209.81	117,543.83	160,508.31
Scenario 2	VES Contract Waste	179,918.76	187,500.81	203,044.67	237,578.23
	GMT Balance	44,918.76	52,500.81	68,044.67	102,578.23
Scenario 3	VES Contract Waste	185,588.45	197,250.49	213,603.33	249,942.99
	GMT Balance	50,588.45	62,250.49	78,603.33	114,942.99
Scenario 4	VES Contract Waste	257,096.84	255,771.87	256,925.15	259,506.64
	GMT Balance	122,096.84	120,771.87	121,925.15	124,506.64
Scenario 5	VES Contract Waste	197,579.29	205,463.37	222,487.42	260,201.94
	GMT Balance	62,579.29	70,463.37	87,487.42	125,201.94

Of the scenarios tested there is not one scenario where the anticipated level of residual waste fails to meet the GMT presented by VES in the RPP.

Table 4.9 shows the recycling rate that would be achieved if 135,000 tonnes per annum (GMT set out in the Contract) of residual waste was generated demonstrating that even with improved recycling rates it is unlikely that the minimum level of residual waste stated in the Contract would be breached.

Table 4.9: Recycling rate if the GMT was met but not exceeded

	2015/16	2020/21	2030/31	2050/51
Recycling Rate should 135,000 tonnes per annum of residual waste be produced	74.79%	75.97%	78.02%	81.21%

As can be demonstrated by the information contained in the main body of the report and above, there is much that can still be done to improve performance in Hertfordshire and the Council continues to add to the good work already achieved by committing to a level of non-statutory funding for partner authorities through the alternative financial model and contributions to the HWP.

Appendix 5 - Financial Modelling Assumptions

The financial modelling used to assess the suitability of the RPP is considerate of existing arrangements and was informed by the market engagement exercise. The final RPP financial model was received by the Council on Friday 4 December 2015. An initial quality assurance review was conducted and limited clarifications and/or challenges were raised.

The affordability modelling work carried out considers not only the cost of disposal at facility(ies) but also the transfer of waste and the management of infrastructure such as waste transfer stations. The model also contains all wider system Waste Disposal Authority costs such as organic waste arrangements and the payment of recycling credits.

Extensive work has been carried out with the Authority's financial advisors PwC to develop and establish a robust affordability model that can be used to evaluate the costs of the RPP as well as the alternative disposal options available.

The figures produced by the waste flow modelling were provided to VES to be used for the development of the RPP proposal and have been used in the affordability modelling to evaluate the anticipated costs of disposal using a range of alternative options.

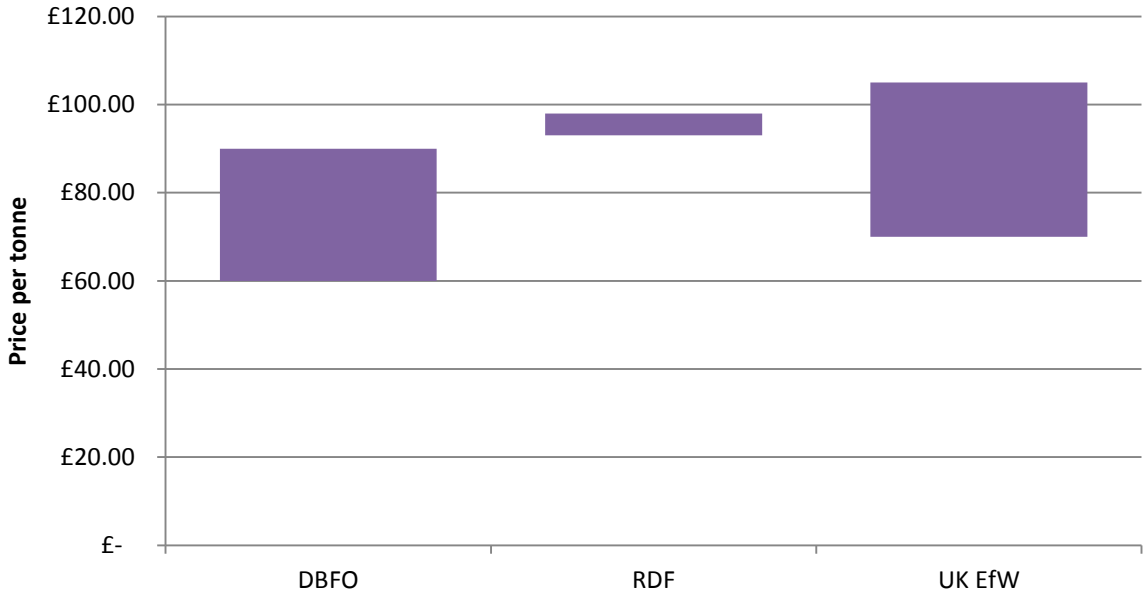
Following the receipt of the market consultation exercise, responses were collated and analysed in order to feed into the affordability modelling. The responses fell into three categories, Design Build Finance Operate (DBFO), RDF and UK EfW, Figure 5.1 reflects the range of gate fees presented by the market for these three categories.

Based on the information and level of detail provided in response to the market consultation exercise, the results were analysed and developed into six credible alternative scenarios which in turn fed into the affordability modelling.

Credible Alternative Scenario 1	EfW solution with multiple suppliers
Credible Alternative Scenario 2	EfW solution with a single supplier
Credible Alternative Scenario 3	RDF solution with multiple suppliers
Credible Alternative Scenario 4	EfW/RDF combination
Credible Alternative Scenario 5	Solution using the WRAP EfW median gate fees[1]
Credible Alternative Scenario 6	Solution using the WRAP MBT/MHT median gate fee

[1] WRAP (2014) Gate Fees report 2013/2014 – Comparing the Costs of Alternative Waste Treatment Options
EfW post–2000 facilities: Median gate fee £94
MBT/MHT: Median gate fee £84

Figure 5.1: Range of gate fees provided in response to the market consultation exercise, grouped by solution presented.



In considering whether to model a new Design, Build Finance and Operate (DBFO) option as a comparator to the RPP officers carried out an assessment of the key value drivers to determine whether a clear case can be made that a new DBFO project could improve upon the RPP offer provided by VES. The assessment conclusions were as follows:

- It was considered that in the event a DBFO would represent greater value it would need to improve on the RPP by sufficient distance to cover the RPP termination costs and the expected additional procurement costs even without taking any account of the delay in operations a new procurement would cause.

- Construction costs and operating expenses are key drivers to any DBFO project and, in consultation with the Council's financial advisors PwC, it was believed that a new DBFO would not have a material advantage over the RPP in terms of capital or operational spend. The RPP value is driven in part by the third party revenue assumptions, and whilst some assumptions have altered from those achieved during the 2011 RWTP Contract tender process, they are a reasonable reflection of the market movement in this time and likely to be reflected by alternative bidders.

- Where DBFO responses to the market engagement exercise referenced access to renewables subsidies such as the Contract For Difference (CfDs) or Renewable Obligation Certificates (ROCs), these were seen as sufficiently

uncertain as to be unlikely to present a competitive advantage for any alternative market solution.

- The other key value driver is the financing costs of the project, an alternative funding solution may be able to generate value against the Internal Rate of Return offered by the RPP structure, but VES's blended IRR is not abnormal in the market and any bank-funded solution an alternative bidder may offer may achieve lower terms, but would come with reduced funding certainty and additional funding market risk factors which, it was suggested by PwC, would outweigh the possibility of realising a saving compared to the VES funding solution.

- Whilst the competitive tension a fresh open-market procurement would bring for a DBFO solution is helpful, the procurement regulations the RPP is working under, allied with the reasonable expectation by VES that the Council could exercise its termination rights, do not suggest that this would offer material value to the Council.

Based on these considerations officers are of the view that a new DBFO procurement would not offer a sufficient expectation of comparable or better value than the RPP as to merit detailed modelling.

The credible alternative scenarios were modelled from the 1st April 2018 to coincide with the natural residual waste disposal interim contract expiry date. The assumption used in the modelling of the alternative options is that post expiry of the current residual waste disposal contracts the credible alternatives will begin to come into effect.

Dependent on the end disposal destination, haulage is a high component of the overall modelled cost of disposal. To establish an estimate on the cost of haulage to the destinations put forward in the market consultation exercise a bespoke methodology to calculate the haulage costs was developed. The model takes into consideration factors such as the travelling time, average cost of vehicle, fuel and driver, driver time and how many trips one driver can make to a disposal point in one day.

The outputs from this model were then reviewed, and the assumptions finalised, in discussions with our financial advisors PWC, and using their understanding of the haulage market.

In relation to supporting infrastructure the assumption is that an Eastern Transfer Station (ETS) is constructed and operational from February 2019 and that a new Northern Transfer station is operational from July 2020.

The Council holds the risk under the Contract for movement in the foreign exchange rate and the exchange rate conversion factor for the Contract is fixed from shortly after the point in time that the challenge period for a planning permission has expired. The affordability analysis included a range of sensitivities to provide an indication of the effect of movement that the foreign exchange rate in the RPP model could have on the blended unitary charge and how this compares to the credible alternatives modelled.

More detailed commercially sensitive information is set out in the Part II annex to this report.

Appendix 6 - Commercial implications and risk allocation

As is explored in the main body of the report at section 12, the risk allocation assumed in the Contract is not impacted by the RPP proposal. The changes proposed to be made to the Contract to bring the RPP into effect are consequential on the RPP. There are some changes that represent an improved commercial position for the Council but overall the changes are either of no commercial significance or their overall impact on the Council is neutral. The changes proposed to the Contract are not substantial.

The changes to the Contract are described in section 14 of Part 1 of the main body of the report. Other key changes consequential on the RPP are set out for Members in Table 6.1 and Table 6.2 below.

Table 6.1: Changes to the Contract required for RPP

	Key contractual feature in 2011 RWTP Contract	Impact of RPP
1.	**Contract form and risk transfer to Veolia and retained by the Council:** In order to secure revenue grant support, Private Finance Initiative ("PFI") contracts must comply with standard principles and drafting in HM Treasury's guidance known as the "Standardisation of PFI Contracts" Version 4 ("SoPC4"). Further, such contracts must also comply with guidance set out by the relevant sponsoring department. In the case of waste PFI, the sponsoring department is Defra which has published its own model contact complying with HM Treasury guidance and containing approved derogations specific to the waste sector. The principal changes were to render the Contract specific to the proposed site, technical and funding solution. Improved commercial positions have also been secured for the Council during the competitive dialogue process	Contract form remains substantially the same save for consequential changes to give effect to RPP. No overall change to balance of risk assumed in 2011 Contract.
2.	**Contracting party:** SoPC4 assumes that the successful bidder will establish a special purpose vehicle ("SPV") to deliver the project. The SPV for the Contract is Veolia ES Hertfordshire Ltd, a wholly owned subsidiary of Veolia ES Aurora Limited which is turn is owned by a French corporation.	No change to contracting counter party. Contract will remain with Veolia ES Hertfordshire Ltd

3.	**Contractual overview:** In summary, the Contract assumes that VES must design, build, finance and operate the facility and accept the vast majority of the risks associated with these obligations. If the facility is not constructed by a longstop date or if, having been constructed, does not perform to accept waste or to divert sufficient waste from landfill the Council may terminate the Contract. If the Contract is terminated, the facility will become the Council's property.	No change save for treatment of Facility on an expiry and early termination.

Risk transfer and risks retained by the Council - The risk transfer to the private sector is never absolute and it is important to recognise that some risks remain for the Council. The principal risks associated with the Contract (as proposed to be varied by the RPP) are set out in Table 6.2.

Table 6.2: Risk comparison

Risk	Treatment in 2011 Contract	Impact of RPP
Planning risk	VES must use reasonable endeavours to secure a planning permission. If despite this it has not done so by a longstop date, and the project cannot be rescued by the agreement of a revised project plan, the Council may terminate the Contract but in those circumstances the Council must pay a breakage sum to VES. Veolia have agreed to cap their costs and they are far lower than caps agreed on other Waste PPP/PFI projects. However, they remain a significant potential liability for the Council in the event of planning failure. Compensation is payable up to the following caps: • Veolia's sub-contractor's costs (**Construction Contractor's Development Costs**) capped at **£366,017 (indexed);** and • Veolia's own development	VES remain responsible for obtaining planning permission for RPP proposal and to bear all costs associated with planning application. If planning permission for the RPP development at Rye House is refused or called in the Council may terminate the Contract and pay compensation at the capped sums included in the Contract (note that no changes are proposed to the capped sums included in the Contract by the RPP so the Council would remain liable to pay compensation up to the same capped sums included in the 2011 Contract terms). These are: • VES' sub-contractor costs capped at £336,017 (indexed) • VES' own development costs capped at £650,000 (indexed from the RPP variation date). The RPP will also provide a mechanism to allow either party to appeal or fund the cost of

Table 6.2: Risk comparison		
Risk	**Treatment in 2011 Contract**	**Impact of RPP**
	costs (**Contractor's Development Costs**) capped at **£650,000**. If planning permission is obtained by the longstop date but there is a delay to the planned service commencement date, the Unitary Charge may increase to reflect inflation in the construction costs and to reflect that the operational period will be shorter than the assumed 25 years.	participating in any planning inquiry rather than terminate the Contract but this is an option only for the Council to afford flexibility in the Contract and the Council is not obliged to pay any additional costs to pursue proceedings.
Permit risk	Generally the risk associated with obtaining an environmental permit is treated the same as planning risk but Veolia has agreed to accept a greater amount of risk in relation to obtaining the environmental permit than is assumed in Defra's model contract. The Contractor must use reasonable endeavours to secure an environmental permit for the facility. If despite this it has not done so by a longstop date, the Council may terminate the contract. Veolia has not sought any form of compensation for delay or on termination for failure to obtain an environmental permit.	No change.
Site delivery and granting of lease / restrictive covenant	As the proposed site is in Council ownership, the Council must grant a lease of the site for the full contract period. The lease is to be granted at the start of the proposed construction period to allow Veolia access to start the works. The title to the site has a restrictive covenant preventing the intended use. To overreach the restrictive covenant the Council must appropriate the site for planning purposes. This remains a Council responsibility so that any delay or	VES is responsible for site delivery and for complying with the terms of the Headlease with Tarmac so the Council risks associated with New Barnfield are removed from the Contract.

Table 6.2: Risk comparison		
Risk	**Treatment in 2011 Contract**	**Impact of RPP**
	failure to overreach the restrictive covenant will be a Council risk.	
Third Party rights and consents in relation to the Site and off site works	These risks rest with VES in the Contract and any failure to obtain such consents would be treated as a Contractor Default to the extent the failure impacted on the performance of the Services.	The RPP requires VES to obtain a number of consents from third parties to secure necessary access and rights over land in and adjacent to the Site. The Contract as varied will require VES to obtain any necessary consents from third parties to deliver the RPP at VES' cost and risk.
Land and construction	As above, the Council must lease the site to VES. The Contractor may seek compensation if the Council does not give access to the site.	As above, VES is responsible for site delivery and so the Council risks associated with New Barnfield are removed from the Contract. Unless the Council exercises its option to take an assignment of the Headlease at the end of the Contract Period (see below), under the RPP VES is liable for decommissioning and site clearance at the end of the useful life of the Facility.
Treatment of asset on early termination and expiry of the Contract	Facility to be constructed on Council freehold site at New Barnfield. Site and facility constructed on it revert to Council on expiry or early termination of the Contract. The Council is liable for decommissioning and site clearance at the end of the useful life of the facility. The Council bears obsolescence risk in relation to the facility (i.e. the risk that the facility is still useful in the future and the risk that the facility can be filled is borne by the Council).	Facility to be constructed on site owned by Tarmac. Headlease granted by Tarmac to VES will be for a term of 50 years but with an option for VES to terminate the Headlease on the termination of the Contract. Simultaneously with the Headlease, VES will grant an underlease to the Council for a term of 30 years to reflect the terms of the Contract. The Council will grant a subunderlease to VES to mirror the Contract term. During any period when the subunderlease is in place, a Supplemental Agreement will "suspend" all of the Council's obligations as tenant under the underlease. The Contract and the leasing structure will assume that on expiry of the Contract the Headlease and

Table 6.2: Risk comparison		
Risk	**Treatment in 2011 Contract**	**Impact of RPP**
		Facility remains with VES for the remainder of the term of the Headlease. However the RPP includes an option for the Council to acquire the ERF facility for the remainder of its operational life by permitting an assignment of the Headlease to the Council on payment by the Council of a one off payment. This structure means that (unless the Council exercises the option to take an assignment of the Headlease): • VES is liable for decommissioning and site clearance at the end of the useful life of the facility. • VES bears obsolescence risk in relation to the facility (i.e. the risk that the facility is still useful in the future and the risk that the facility can be filled is borne by VES). On early termination for Contractor Default the Council will have the option to take an assignment of the Headlease and retender the Contract but in other termination scenarios the Headlease will remain with VES and the Council will have no rights to the Facility after termination of the Contract. The compensation on termination provisions in the Contract are amended in the RPP proposals so they reflect the nature of the RPP asset and this lease structure and so the Council does not overcompensate VES on termination and the risk in the asset remains with VES after termination.

Table 6.2: Risk comparison		
Risk	**Treatment in 2011 Contract**	**Impact of RPP**
Minimum Tonnage	The Council must deliver or else pay for at least 180,000 tonnes of waste a year. However VES must also use reasonable endeavours to secure alternative waste if there is a shortfall (Substitute Waste mechanism – clause 25).	Commercial position remains the same under the RPP save that VES have agreed to reduce the Minimum Tonnage from 180,000 to 135,000 tonnes of waste a year which is an improved position for the Council. This reduction is subject to an agreement by the Council that it will not send waste to other fuel production processes (or third party EfW facilities) prior to sending to VES but does not restrict retention of material for re-use, recycling and/or composting.
Exclusivity	The Council must deliver to VES all residual municipal waste arising in Hertfordshire up to the agreed Maximum Tonnage (345,000 tonnes per annum). This does not include waste retained for recycling or composting. To allow the Council further flexibility, Veolia have also agreed that the Council may withhold the waste that it currently sends to Edmonton until January 2018 and further in any contract year up to 20,000 tonnes per annum.	No changes proposed by RPP save that (i) the carve out for Edmonton Waste up to 2018 is no longer applicable due to revised Planned Services Commencement Date of December 2020; and (ii) the carve out of 20,000 tonnes per annum will only be in place until 31 March 2025 given the reduction in GMT from 180,000 to 135,000 tonnes per annum.
Payment Mechanism as sole remedy	It is normal in PFI that the deductions available under the payment mechanism for performance, non-acceptance and failure to divert are the Council's sole remedy for the performance of the services (apart from claims under the indemnity for breach and/or termination).	No change
Failure to divert from landfill / Landfill Allowance Trading Scheme (LATS) risk	The Contractor takes landfill risk if it landfills more than the guaranteed amount. Waste landfilled in excess of the guaranteed amount will result in a diversion deduction whether or not LATS is actually incurred. However liability for failure to divert from landfill is capped at levels	No change (albeit the LATS risk is no longer relevant due to change in law since 2011)

Table 6.2: Risk comparison		
Risk	**Treatment in 2011 Contract**	**Impact of RPP**
	which are normal and on market. It is unlikely that the Council would incur greater liability than the cap unless it was already in a situation where the contract could be terminated. VES have also agreed to take full landfill tax risk for the life of the contract.	
Failure to achieve recycling targets	VES have agreed to a further deduction under the Payment Mechanism that allows the Council to make deductions if VES fails to achieve its recycling targets	No change to Payment Mechanism remedy proposed by RPP. VES remain liable for failure to recycle albeit the target now relates to metals rather than the recyclate associated with the MPT
Non Acceptance Deduction	Non-acceptance of waste results in the Council being able to deduct its *actual* mitigated costs of alternative disposal (but of course this is always subject to VES (an SPV and without assets beyond the project, see contracting with an SPV below))	No change to Payment Mechanism remedy proposed by RPP. VES remain liable for non-acceptance of waste
Performance Deduction	The Council may make performance deductions if key performance indicators are not achieved. However, as is normal, these are capped at a proportion of the unitary charge.	No change to risk allocation proposed by RPP. VES retain performance risk
Composition risk	This risk is generally shared between the public and private sector but VES have agreed to accept full composition risk provided the Council complies with its obligation to deliver waste up to the Maximum Tonnage (see Exclusivity above)	No change to risk allocation proposed by RPP. VES retain composition risk
Liability Caps	Indemnities are capped but the cap is on-market.	No change to liability caps proposed by RPP
Contracting with a Special Purpose Vehicle	As with all PFI, the Contract is entered into with a special purpose company established for the purpose of delivering the project. This means that, in reality, the	No change proposed by RPP. VES will refresh the PCG on the same terms so that the Council continues to have parent company guarantee support in the event of performance

Table 6.2: Risk comparison		
Risk	**Treatment in 2011 Contract**	**Impact of RPP**
(SPV)	ability of the Council to sue is limited because the SPV only has the project as its single asset. VES has agreed to give the Council a parent company guarantee. Although this is capped on termination for Contractor Default, no parent company guarantee at all would be given for the SPV obligations in a project finance deal and in any event it would be subordinate to the banks. Accordingly, this is a good position for the Council in comparison to other waste PPP/PFI deals.	failure by VES
Change in Law	In brief summary, this is a Council risk, if it is a general change of law which involves capital expenditure or if it is a specific or discriminatory change in law (i.e. one which relates to waste management, emissions, similar facilities or PFI). A change in law requires the Council to return VES to a no-better-no-worse position. This is an absolutely standard PFI position. VES have agreed an improved position however in that the Council is able to "claw back" from Veolia's third party income any Council contribution to changes in law relating to capacity in the facility that is used by third party users (i.e. over time, the Council will only contribute on a pro rata basis equivalent to its usage of the facility)	No change to this risk allocation proposed by the RPP although the Change in Law "no better no worse" provisions have been amended to ensure VES are not overcompensated where the Facility is not transferred to the Council on expiry of the Contract
"Compensation Events" and breach by the Council	Breaches of the Council's express obligations in the contract may lead to claims by VES for compensation (including compensation for lost third party income) or termination of the Contract for "Authority Default". During construction, the Council's obligations are limited to its	RPP proposal removes Council's risks associated with site delivery and obligations to comply with the lease (risk transferred to VES). Accordingly, under RPP Council's obligations are limited to "non-hindrance" and requirement to deliver waste during the operational

Table 6.2: Risk comparison		
Risk	**Treatment in 2011 Contract**	**Impact of RPP**
	obligations in relation to the site and the lease (see above) and to non-hindrance. During the operational period, the Council's obligations are limited to delivering waste in relation to its exclusivity obligation (see above) and to complying with its obligations in relation to the lease of the site (see above)	period (see Exclusivity above)
"Relief Events"	There are certain events defined in the Contract that may prevent the Contractor from performing its obligations. While VES takes the risk for these events in terms of performance and cost, the Council is not entitled to terminate the contract if failure to perform arises directly as a result of a Relief Event. Relief Events include fire, flood and strikes.	No change

Appendix 7 – Equality Impact Assessment (EqIA)

Guidance is available on Compass. Completion of an EqIA should be proportional and relevant to the anticipated impact of the project on equalities. The form can be tailored to your project and should be completed before decisions are made. Key EqIAs should be reviewed by the Business Manager or Service Head, signed off by your department's Equality Action Group (EAG) and sent to the Equality and Diversity team to publish on HertsDirect. For support and advice please contact equalities@hertfordshire.gov.uk.

STEP 1: Responsibility and involvement

Title of proposal/ project/strategy/ procurement/policy	Residual Waste Treatment Programme – Revised Project Plan	**Head of Service or Business Manager**	Matthew King
Names of those involved in completing the EqIA:	Jo Hawes	**Lead officer contact details:**	01992 556207
Date completed:	08/02/16	**Review date:**	TBC

STEP 2: Objectives of proposal and scope of assessment – what do you want to achieve?

Proposal objectives: – what you want to achieve – intended outcomes – purpose and need	The Council entered into contract with Veolia Environmental Services Ltd (VES) for residual waste treatment services including the design, construction, financing and operation of a Recycling and Energy Recovery Facility (RERF) at New Barnfield, Hatfield. Following the decision by the Secretary of State to reject planning permission for the RERF at New Barnfield, the Council has requested a Revised Project Plan (RPP) from VES. The RPP presented by VES is for an energy recovery facility at Rye House, Hoddesdon, acceptance of the RPP is one option that will be presented to Members of the Community Safety and Waste Management Panel before a recommendation is made to Cabinet. The existing disposal arrangements are in place until 2018, should the RPP not be accepted an EqIA would need to be drawn up once a decision has been made on what future approach is to be taken. The outcome of this EqIA is to identify and assess the impact that this decision will have on Hertfordshire

	residents. **This contract deals with HCC's statutory duty to dispose of the county's waste, and is not a service that interacts directly with the public.**
Stakeholders: Who will be affected: the public, partners, staff, service users, local Member etc	**Internal** Existing Staff County Councillors **External** Hertfordshire residents District and Borough Council members Town and Parish Councils

STEP 3: Available data and monitoring information

Relevant equality information For example: Community profiles / service user demographics, data and monitoring information (local and national), similar or previous EqIAs, complaints, audits or inspections, local knowledge and consultations.	**What the data tell us about equalities**
Equality Impact Assessment originally completed as part of the Residual Waste Procurement Project prior to appointing a preferred bidder.	The main impact identified was in relation to Southfield School, which was adjacent to the New Barnfield site. The RPP is in a different location, this impact is not relevant to the RPP proposal. A differential impact was identified as the project was devised to reduce the reliance of the whole county on landfill, and to reduce the impacts of haulage on the wider population.
Equality Impact Assessments from Local Authorities which have looked at changes to their waste disposal activities.	EqIAs have been gathered from Local Authorities which have made changes to large scale waste disposal contracts. EqIAs undertaken by the following Local Authorities have been reviewed and have informed this EqIA: • Cornwall Council • Surrey County Council

STEP 4: Impact Assessment – Service Users, communities and partners (where relevant)

Guidance on groups of service users to consider within each protected group can be found here

Protected characteristic	Potential for differential impact (positive or negative)	What reasonable mitigations can you propose?
Age	No negative impacts currently identified.	Review and monitor.
Disability Including Learning Disability	No negative impacts currently identified.	Review and monitor.
Race	No negative impacts currently identified.	Review and monitor.
Gender reassignment	No negative impacts currently identified.	Review and monitor.
Pregnancy and maternity	No negative impacts currently identified.	Review and monitor.
Religion or belief	No negative impacts currently identified.	Review and monitor.
Sex	No negative impacts currently identified.	Review and monitor.
Sexual orientation	No negative impacts currently identified.	Review and monitor.
Marriage & civil partnership	No negative impacts currently identified.	Review and monitor.
Carers (by association with any of the above)	No negative impacts currently identified.	Review and monitor.
Carers and CARE ACT 2014	From April 2015, carers will be entitled to an assessment of their own needs in the same way as those they care for. If the focus of your EqIA relates to care and support, consider carers' new rights and see the Care Act pages on Compass for more guidance	
	No negative impacts currently identified.	Review and monitor.
Opportunity to advance equality of opportunity and/or foster good relations (Please refer to the guidance for more information on the public sector duties)		

Impact Assessment – Staff (where relevant)

Protected characteristic	Potential for differential impact (positive or negative)	What reasonable mitigation can you propose?
Age	No negative impacts currently identified.	Review and monitor.
Disability Including Learning	No negative impacts currently identified.	Review and monitor.

Protected characteristic	Potential for differential impact (positive or negative)	What reasonable mitigation can you propose?
Disability		
Race	No negative impacts currently identified.	Review and monitor.
Gender reassignment	No negative impacts currently identified.	Review and monitor.
Pregnancy and maternity	No negative impacts currently identified.	Review and monitor.
Religion or belief	No negative impacts currently identified.	Review and monitor.
Sex	No negative impacts currently identified.	Review and monitor.
Sexual orientation	No negative impacts currently identified.	Review and monitor.
Marriage & civil partnership	No negative impacts currently identified.	Review and monitor.
Carers (by association with any of the above)	No negative impacts currently identified.	Review and monitor.
Opportunity to advance equality of opportunity and/or foster good relations (Please refer to the guidance for more information on the public sector duties)		

STEP 5: Gaps identified

Gaps identified Do you need to collect more data/information or carry out consultation? (A 'How to engage' consultation guide is on Compass). How will you make sure your consultation is accessible to those affected?	None identified.

STEP 6: Other impacts

Consider if your proposal has the potential (positive and negative) to impact on areas such as health and wellbeing, crime and disorder and community relations. There is more information in the guidance.

STEP 7: Conclusion of your analysis

Select one conclusion of your analysis	Give details
☒ **No equality impacts identified** – No change required to proposal.	This contract deals with HCC's statutory duty to dispose of the county's waste, and is not a service that interacts directly with the public. No adverse impacts have been identified. There may be opposition to the proposal however at this stage there is nothing to suggest that a particular group of the community will be impacted or will be opposing the RPP.
☐ **Minimal equality impacts identified** – Adverse impacts have been identified, but have been objectively justified (provided you do not unlawfully discriminate). – Ensure decision makers consider the cumulative effect of how a number of decisions impact on equality.	
☐ **Potential equality impacts identified** – Take 'mitigating action' to remove barriers or better advance equality. – Complete the action plan in the next section.	
☐ **Major equality impacts identified** – Stop and remove the policy – The adverse effects are not justified, cannot be mitigated or show unlawful discrimination. – Ensure decision makers understand the equality impact.	

STEP 8: Action plan

Issue or opportunity identified relating to: – Mitigation measures – Further research – Consultation proposal – Monitor and review	**Action proposed**	**Officer Responsible and target date**
Monitor and review	Monitor and review, should the RPP is accepted continue to monitor the EqIA to ensure it is still relevant.	TBC

Issue or opportunity identified relating to: – Mitigation measures – Further research – Consultation proposal – Monitor and review	**Action proposed**	**Officer Responsible and target date**

This EqIA has been reviewed and signed off by:

Head of Service or Business Manager: **Date:**

Equality Action Group Chair: **Date:**

HCC's Diversity Board requires the Equality team to compile a central list of EqIAs so a random sample can be quality assured. Each Equality Action Group is encouraged to keep a forward plan of key service decisions that may require an EqIA, but please can you ensure the Equality team is made aware of any EqIAs completed so we can add them to our list. (email: equalities@hertfordshire.gov.uk). Thank you.