COMMUNITIES, ENVIRONMENT AND HIGHWAYS SELECT COMMITTEE

MONDAY, 20 MARCH 2023

STRATEGIC WASTE INFRASTRUCTURE PLAN

Purpose of report: To provide an outline programme of work for the development of strategic waste infrastructure, to support a resilient and efficient waste management service for residents.

Introduction

1. Surrey County Council (SCC) as the statutory Waste Disposal Authority (WDA) is responsible for the bulking, transport, treatment, and disposal of all local authority collected waste by the eleven Waste Collection Authorities (WCA) within Surrey and waste delivered to the Community Recycling Centres (CRC). SCC's waste infrastructure portfolio consists of:

    - five Waste Transfer Stations (WTS) - where material is bulked before heading to a treatment or disposal facility;
    - fifteen CRCs - where residents can bring waste that is not suitable for their kerbside collections;
    - a gasifier treating 55,000 tonnes per year of residual waste;
    - an anaerobic digestion facility treating 40,000 tonnes per year of currently collected food waste; and
    - in addition to these assets a range of third-party waste transfer stations and treatment infrastructure is used to deliver the service.

2. A full review of SCC's waste service and existing infrastructure assets has been undertaken as part of the Rethinking Waste Programme, which identified that all existing assets have now been exhausted and there will be gaps in SCC's waste infrastructure network post 2024 (Appendix 1). Consequently, this paper sets out a high-level Infrastructure Plan that will provide SCC with **resilience, security,** and **value for money** for the future delivery of its statutory waste services.

3. This plan sets out the identified infrastructure developments required within the next seven years, to 2030, to sustain our waste management services over the next thirty years. It focuses on the upgrade and development of assets within the geography of Surrey where there is a critical need for that infrastructure. It

presents a series of recommended work packages needed to safeguard the future of waste services and seeks endorsement and review by the Committee prior to taking proposals to Cabinet. This plan does not consider out of county infrastructure requirements.

4. This Infrastructure Plan deals specifically with the infrastructure required to manage local authority collected waste (LACW), generated by households, for which SCC has a statutory duty to dispose. This differs from the Minerals and Waste Local Plan, which is a statutory local plan setting out the planning policy framework. It provides for minerals and waste management developments that mitigate against and help Surrey adapt to climate change, combat biodiversity loss, and reflect the growing overlap between minerals development and waste management facilities from other developments. This plan covers the management of LACW, Commercial and Industrial wastes and Construction, Demolition and Excervation wastes. The volumes of the latter far exceed that generated at the household and require different forms of treatment[1].

Why do we need a Strategic Waste Infrastructure Plan?

5. The **key drivers** for this **Strategic Waste Infrastructure Plan** are:

   a) the need to build resilience and self-sufficiency within SCC waste infrastructure and reduce reliance on third-party outsourced services;

   b) to develop new infrastructure capacity within the SCC network to address current limitations in the County and the South-East;

   c) the need to extract greater value for money from our services and recognise budgetary pressures;

   d) the need for frictionless working with WCA to drive efficiencies and improve performance; and

   e) the need to be able to adapt and respond accordingly to changing national policies and align as much as possible with Surrey Environment Partnership (SEP).

Our Vision

6. Our vision is to fundamentally shift the way we deal with municipal waste within Surrey, driving a circular economy that aims to keep resources in use as long as possible, so we extract maximum value from them. We will create new infrastructure and work with districts and boroughs in a more collaborative way

[1] Surrey Waste Local Plan Part 1 (surreycc.gov.uk)

to provide resilience, security and value for money for the future delivery of the waste services.

7. The desired outcomes for this Strategic Waste Infrastructure Plan are:

   a) that a circular economy model is adopted to minimise waste and maximise value of resources;

   b) a reduction in the carbon impact of waste treatment, transportation and disposal;

   c) for more waste to be reused or recycled;

   d) to minimise the amount of waste sent to landfill;

   e) to ensure the Council is in control of its waste disposal costs as far as possible and can react to market changes;

   f) to ensure costs for dealing with waste are as low as possible;

   g) to maximise resource recovery from residual waste materials; and

   h) to be aligned and consistent with the changing policy landscape, namely the 25 Year Environment Plan, that sets out the Resources and Waste Strategy.

Proposed Work Packages

Package 1: Waste Transfer Stations – Background

8. Waste Transfer Stations (WTSs) are a critical part of waste infrastructure in Surrey. This is where the material collected at the kerbside by Waste Collection Authorities (WCAs) and Community Recycling Centres (CRCs) is bulked before onward haulage to treatment facilities across the UK.

9. WTSs reduce transport distances for the WCAs and thus reduce costs and adverse environmental impacts. They also provide an opportunity to screen recyclable waste for contamination before it is sent to treatment, improving material quality and again reducing costs.

10. There are nine WTS utilised by the waste service. SCC owns five of these, which accounts for the bulking of circa 62 per cent of material disposed of in Surrey.

11. Of the SCC-owned WTS's, the existing site at Slyfield is the busiest in the county and at over 50 years old, is outdated and no longer fit for purpose to meet the needs of the number of waste streams collected today (although it is maintained as a safe and lawful working environment).

12. The remainder of material is either direct-delivered to third-party facilities for treatment or is sent for bulking at third-party WTSs.

13. Three further third-party facilities are utilised by SUEZ Surrey. Once the current PFI contract comes to an end, some of these bulking facilities may no longer be available to SCC, and we will need to find a location for up to 60,000 tonnes of waste somewhere else in the network.

14. A fourth third-party operated facility, Doman Road (owned by Surrey Heath), is operated by Amey and is utilised for the bulking of Surrey Heath's food waste and dry recycling. At present, this facility is not fit for purpose to meet the needs of the number of waste streams collected today (although it is maintained as a safe and lawful working environment).

15. In addition to the factors identified above, the UK Government's Resources and Waste Strategy (RWS) could also have an impact on the capacity of WTS infrastructure required in Surrey. For example, if, through the introduction of consistent collections, WCAs are required to move towards greater separation of recyclable materials at the kerbside, then there will be a need for additional bulking bays at the WTSs, which currently, do not exist.

16. Both the limited capacity at SCC WTSs and the use of third-party WTSs for the bulking of waste presents the first issue to be addressed by this Infrastructure Plan.

Waste Transfer Stations – Recommendations

17. The recommendations to overcome this lack of capacity are:

    16.1 ***Site 1. Slyfield WTS***: To expand capacity at our existing network by continuing to work with Guildford Borough Council (GBC) on developing a new WTS at Slyfield. Particularly, as the facility is planned as part of GBC's wider development of the area. The Weyside Urban Village project will involve relocation of the Thames Water Sewage Treatment works, delivery of new housing and industrial units as well as relocation of the waste site. The relocation of the waste site is scheduled for 2026/27, with the facility adding 25,000 tonnes of bulking capacity to the network.

    16.2 ***Site 2. Doman Road WTS***: To consider the redevelopment and expansion of Doman Road working alongside Surrey Heath Borough Council (SHBC), who are currently exploring options to redesign the site. This will add an extra 40,000 tonnes of bulking capacity to the network.

18. These will be strategic sites for SCC to:

    a) replace the third-party facilities;

b) provide long-term security of bulking capacity;

c) provide the additional 60,000 tonnes of WTS capacity required (see paragraph 12 above);

d) increase the resilience of the network; and

e) provide commercial opportunities resulting from initiatives in the Resources and Wastes Strategy, where appropriate.

Waste Treatment Infrastructure – Background

19. 'Treatment infrastructure' refers to all infrastructure that is used to reuse, recycle and treat the waste disposed of in Surrey. Historically, it has been extremely difficult to develop treatment infrastructure in Surrey and therefore only 20 per cetnt of Surrey's waste and recycling is managed at SCC-owned facilities.

20. Whilst for some materials, third-party treatment is the most optimal solution, there are others where local SCC-owned infrastructure would be preferable. This presents the second issue to be addressed by the Infrastructure Plan.

Package 2: Dry Recycling Infrastructure - Background

21. Dry recycling collected from households in Surrey is currently processed at four third-party facilities across the South-East. Only one of which is based in Surrey.

22. The processing of co-collected dry recycling occurs at a Materials Recovery Facility (MRF). Here the various materials, e.g., paper, card, plastic bottles, pots, tubs and tray, steel and aluminium cans are separated into individual fractions, bailed and sold to the secondary materials market to be remade into new products.

23. There are limited, alternative, local facilities within Surrey and the surrounding region for bulking and sorting of recycled materials, leading to longer transport distances, increased transportation costs and carbon impacts.

24. This limited recycling treatment capacity, coupled with increased material quality requirements and restrictions on foreign exports of waste has led to an increase in processing costs over which SCC has little control.

25. The volatility of global demand for recyclable material, linked to raw material prices and changes in consumer habits has resulted in significant fluctuations in the value of recycled materials.

26. There is an increasing focus on the quality of materials collected and sent for recycling, meaning that contamination by non-target materials is heavily penalised.

27. The Resources and Waste Strategy (RWS) will require flexibility in recycling treatment facilities. At the time of writing, there is significant uncertainty as to how and when the private sector will respond to these policy changes and whether access to the appropriate recycling capacity at an affordable price will be possible.

28. As the timing of RWS changes are currently uncertain, any new contractual arrangements with an outsourced service provider will either be risk priced or subject to negotiation of additional costs at the time of any changes to WCA collection services.

Dry Recycling Infrastructure – Recommendations

29. The recommendation to overcome these difficulties is a two-facility dry recycling solution either owned or co-owned by SCC.

30. ***Site 1. Randall's Road, Leatherhead:*** Explore opportunities to utilise existing Surrey based dry recycling infrastructure post 2024 by working with Mole Valley District Council (MVDC).

    29.1 Noting that the Surrey based facility currently used to process dry recycling is located at Randall's Road, Leatherhead and is a strategic asset in the management of dry mixed recycling (DMR). As the land on which the facility is sited is owned by MVDC and the third-party lease is due to expire in 2025, this site presents an opportunity to increase the resilience of the network and maintain local treatment capacity. Further the facility accepts 40,000 tonnes of directly delivered waste from three districts, relieving the pressure on the WTS network.

    29.2 SCC will continue pursuing dialogue with MVDC for the continued use of the site as a MRF. Following the identification of a feasible solution for the site develop a detailed business case.

31. ***Site 2. Trumps Farm, Chertsey***: Explore the development of a dry recycling processing facility (Material Recovery Facility, MRF), on land owned by SCC, at Trumps Farm, Chertsey. This land has been identified in the Surrey Waste Local Plan 2019-2033 for this purpose.

    30.1 It is proposed that officers work with specialist planning advisors to work up a draft development scheme for the MRF to enable consultation with the local community and other stakeholders to identify and mitigate the facilities impact on residents. Following this initial engagement, a

decision would then be made as to whether to submit a planning application for the MRF facility.

32. Our proposed multi-facility solution would:

a) Reduce cost and environmental impact of long-distance haulage for out of county treatment of dry recycling.

b) Allow for a greater degree of control over processing costs.

c) Enable a better understanding of, and plan for changes in, material value, associated with changing global demands.

d) Enable greater collaboration with WCAs to incentivise the collection of high-quality materials and invest in processes that will reduce levels of contamination.

e) Allow for flexibility in processing capabilities of new materials streams collected at the kerbside.

f) Reduce the risks associated with a single asset.

g) Create resilience within our treatment network.

h) Increase direct delivery capacity, reducing any additional burdens on the WTS network.

Package 3. Ivy Dene House Reuse Hub – Background

32 An initial feasibility study has shown potential for the development of a reuse hub on a site adjacent to the Surrey Eco Park, Shepperton.

33 The concept would be to showcase exemplar circular economy principles, bringing together a range of different services within SCC as well as external organisations.

34 The hub could include facilities for the repair and upcycling of a wide range of products (e.g., bicycles, electrical goods, furniture), a “library of things,” community space for education as well as a café.

35 It is envisaged that an exemplar industrial building (‘BREAM excellent’ rated) would be built on the site of Ivy Dene House and which would be environmentally sympathetic (e.g., using solar panels and ‘green walls’).

36 There is the potential for much greater community involvement in the Reuse Hub, through partnering with local charities and voluntary organisations and

helping local people acquire skills for future employment. Upcycled items and items fit for reuse could be sold to generate revenue.

Reuse Hub at Ivy Dene Cottage – Recommendation

37 It is recommended that a detailed feasibility study is conducted to establish whether a financially self-sufficient purpose-built re-use and repair facility could be constructed on the site, seeking to improve on current reuse shops in place already in the county.

38 In order to:

a) Increase awareness of the circular economy and reuse.

b) Provide community space(s).

c) Deliver social value including adult education opportunities, possibly opportunities for offender rehabilitation.

d) Generate income from the sale of reusable goods.

Package 4: Bulky Waste – Background

39 Surrey residents produce approximately 10,000 tonnes of bulky waste each year. Currently, this is managed by SUEZ Surrey under the integrated contract.

40 The bulky waste collected at the Community Recycling Centres (CRC) is sorted into reusable and non-reusable items, with the reusable items diverted through SCCs network of five CRC reuse shops, and the non-reusable items either shredded at SUEZ sites in Mitcham or Morden before being sent to Energy from Waste (EfW) or are sent directly to landfill.

41 Market engagement conducted in the Summer of 2022 identified a lack of localised infrastructure outside of the shredding capability provided by Suez. Secondary to this, 95 per cent of EfW facilities in the UK do not have front end shredding capabilities.

42 The impact of this is two-fold. The first is that authorities without access to a specialised bulky waste shredder send their bulky waste to landfill. The second is that, if the provider of a bulky waste shredder, is not the same as that for residual waste treatment, then the waste will be considered to be double handled, (doubling the cost to manage it) before it can be disposed of.

43 The impending introduction of legislation regulating Persistent Organic Pollutants (POPs) will require specialist shredding of bulky material containing POPs material so that it can be sent for incineration instead of being landfilled.

Typically, this is material comprising any furniture containing soft furnishings which are coated with a fire-retardant spray.

44 Therefore, a solution is required for bulky waste that:

a) is compliant with legislation,

b) maximises reuse solutions, wherever possible,

c) avoids the material being double handled by third parties, and

d) provides value for money.

Bulky Waste – Recommendation

45 There is minimal infrastructure available to treat bulky waste, either in Surrey or the South-East, it is recommended that a feasibility study is conducted to explore solutions for treatment of bulky waste within Surrey. This study should consider the opportunities for this to be co-located at either Trumps Farm and/or Doman Road as previously identified.

45.1 If a solution is identified, then a business case should be developed that provides the basis on which the future of bulky waste treatment can be decided. This has the potential to be an environmentally and economically beneficial initiative that reduces the double handling of bulky waste and allows SCC to provide resilience and security of treatment outlets.

Package 5: Mattresses – Background

46 Approximately, 350 tonnes of mattresses are generated in Surrey annually and are currently managed as part of the integrated PFI contract with SUEZ Surrey.

47 Historically, mattresses have been sent to landfill as they have been difficult and expensive to either shred or deconstruct.

48 Mattresses are a difficult material to handle at a landfill site as they do not compact, and the wire gets tangled around the compaction machines. As a result, landfill sites have increased gate fees for mattresses to recognise the handling difficulties and to promote alternatives treatment solutions.

49 The relatively light weight of mattresses and the inability to be able to compact them means that they are voluminous items that cannot be transported easily or cheaply.

50 It has become increasingly financially viable to send mattresses to reprocessors that deconstruct them into their constituent parts: metal, fabric and foam. Neighbouring counties have started to utilise mechanical shredders to break

down mattresses so that the material can be recycled or recovered in an EfW plant.

51 A solution is required that:

a) maximises recycling or ensure the material can be processed for recovery (wherever possible avoiding landfill),

b) reduces the distance material has to be transported, and

c) provides value for money.

Mattresses – Recommendation

52 Given that there is little infrastructure available to treat mattresses, either in Surrey or in the surrounding regions, the recommendation is than a feasibility study is conducted to explore solutions for mattress treatment within Surrey. This study should consider the opportunities for this treatment to be co-located at either Trumps Farm and/or Doman Road as previously identified.

52.1 If a solution is identified, then a business case should be developed that provides the basis on which the future of mattress treatment can be decided. This has the potential to be an environmentally and economically beneficial initiative that reduces the amount of waste SCC sends to landfill, increases recycling rates and allows SCC to provide resilience and security of treatment outlets.

Risks

53 Risk registers have been developed for each of the work packages identified. The common risk shared by all of these packages is the risk of non-intervention, such that the alternative would be a sub-optimal solution, in terms of efficiencies, cost and control, of using third party facilities.

Recommendations:

54 Committee Members are asked to consider and provide comment on the proposals outlined in the Packages above and specifically the following recommendations for their further development -

55 Package 1: Waste Transfer Station Infrastructure:

54.1 Site 1. Slyfield, Guildford - SCC continue to work with GBC on the redevelopment of the site.

54.2 Site 2. Doman Road, Camberley - SCC continue to engage with SHBC to assess purchasing or leasing on a long-term basis. Following the identification of a feasible solution for the site, develop a detailed business case.

56 Package 2: Dry Recycling Infrastructure

55.1 Site 1: Randalls Road, Leatherhead - SCC continue pursuing dialogue with MVDC for the continued use of the site as a MRF. Following the identification of a feasible solution for the site develop a detailed business case.

55.2 Site 2: Trumps Farm Chertsey – SCC to appoint a consultant to support on the development of the consultation process and draft planning application MRF at Trumps Farm. Begin the development of a detailed business case.

57 Package 3 - Reuse Hub at Ivy Dene Cottage - SCC to develop a feasibility study for a self-sufficient purpose-built reuse and repair facility. To develop business case (if solution identified).

58 Package 4 - Bulky Waste –SCC to develop a feasibility study for bulky waste treatment within Surrey. To develop business case (if solution identified).

59 Package 5 – Mattresses – SCC to develop to develop feasibility study for mattress treatment within Surrey. To develop business case (if solution identified).

Conclusions:

59 This Infrastructure Plan details the recommendations for the projects and enabling work required to support the decision-making on a range of different pieces of infrastructure, either in conjunction with the WCAs or SCC, only, that should:

a) increase SCC's resilience to imminent changes in waste policy,

b) increase the security of bulking and treatment outlets,

c) reduce SCC's dependency on third-party outsourcing, and

d) ensure value for money for the future delivery of the waste services.

Next steps:

60 Officers are currently working through a detailed timetable for the programme of work, including the allocation of resource and engagement with partners,

including other services within SCC, district and borough colleagues and expert consultancy support, where necessary.

61 On approval of the recommendations the team will begin to work through the actions identified herein. It is envisaged that if a project has a strong business case, then the relevant approvals will be sought independently.

62 A high-level programme of these activities is the Table below.

Recommendation	Jan-Mar 23	Apr-Jun 23	Jul-Sep 23	Oct-Dec 23	Jan-Mar 24	Apr-Jun 24
Plan Socialisation						
Doman Road Business Case Development						
MVDC Feasibility Study						
Trumps Farm Consultation and Draft Planning Application						
Trumps Farm Business Case Development						
Bulky Waste Treatment Feasibility Study						
Mattresses Treatment Feasibility Study						
Reuse Hub Concept Feasibility						

Report contact

1) Jade-Ashlee Cox-Rawling, Rethinking Waste Programme Manger

   TSU on behalf of Waste Service

2) Steven Foster, Interim Director for Waste

Contact details

Jade.coxrawling@surreycc.gov.uk

Steven.foster@surreycc.gov.uk

Sources/background papers

1. Report: SCC Waste Infrastructure Plan V5

2. Report: Collection System Modelling, 2020-21. SCC with WRAP and SEP

3. Report: High-level business case – Trumps Farm MRF, 2020-21. External consultancies – Local Partnerships / Frith.

4. Report: Surrey Waste Local Plan 2019-2033

5. Legislation: Resources and Waste Strategy

6. Legislation: Environment Bill

7. Legislation: Persistent Organic Pollutants.

8. Market Engagement (Notes taken by ETI and Procurement Teams)

Appendices

Appendix 1 – Waste Service Infrastructure Plan for Surrey

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