RUTLAND
LOCAL PLAN

Local Plan Review

Local Waste Needs Assessment

Rutland
County Council

September 2018

Rutland Local Plan Review

Local Waste Needs Assessment

Contents

Rutland Local Plan Review

Local Waste Needs Assessment

Waste planning in context

1. The National Planning Policy Framework does not specifically address waste matters, detailed waste planning policies are set out in the National Planning Policy for Waste (NPPW). The NPPW is to be read in conjunction with the NPPF, the National Waste Management Plan for England and National Policy Statements (NPS) for waste water and hazardous waste.

2. In relation to the preparation of plans the NPPW requires Waste Planning Authorities (WPAs) to ensure that the planned provision of new capacity and its spatial distribution is based on robust analysis of best available data and information, and an appraisal of options. Spurious precision should be avoided. In addition Local Plans should identify sufficient opportunities to meet the identified needs of their area for the management of waste streams and in doing so:
    - drive waste management up the waste hierarchy;
    - recognise the need for a mix of types and scale of facilities, and that adequate provision must be made for waste disposal (including for residues from treated wastes);
    - identify tonnages and percentages of waste requiring different types of management over the plan period;
    - consider the extent to which existing operational facilities would satisfy any identified need;
    - consider wider waste management needs; and
    - work collaboratively (with other WPA's through the Duty to Cooperate) to provide a suitable network of facilities to deliver sustainable waste management.

3. Local Plans, should also identify sites and/or areas for waste management facilities and in doing so:
    - identify the broad type(s) of facility that would be appropriate;
    - take account of the proximity principle (particularly regarding disposal and the recovery of municipal waste) and recognise the role of catchment areas in securing economic viability;
    - consider opportunities for on-site waste management;
    - consider a broad range of locations including industrial sites, and consider opportunities to co-locate waste management facilities together and with complementary activities; and
    - give priority to the re-use of previously-developed land, sites identified for employment uses, and redundant agricultural and forestry buildings and their curtilages.

4. The NPPW also sets out criteria against which the identification of sites/ areas for waste management facilities should be assessed.

5. In relation to the wider policy context the Waste Framework Directive (2008/98/EC) sets out the concept of the waste hierarchy (prevention, preparation for re-use, recycling, other recovery e.g. energy recovery and disposal), proximity principle and self-sufficiency. It also requires that waste is recovered or disposed of without endangering human health or causing harm to the environment. Article 28 of the Waste Framework Directive (concerning Waste Management Plans) requires an assessment of how the current waste management and disposal capacities will shift over time in response to the closure of existing waste management and disposal facilities and the need for additional waste installation infrastructure.

6. The UK Waste Regulations 2011 transposes the Waste Framework Directive to UK law.

7. The Landfill Directive (99/31/EEC) aims to prevent or reduce as far as possible negative effects on the environment from the landfilling of waste, and setting targets for the reduction of biodegradable municipal waste going to landfill.

The adopted Local Plan

8. Waste management and disposal is currently addressed through the adopted Core Strategy and Site Allocations DPDs under several policies, the key policies being Policy CS25 - Waste management and disposal, Policy SP4 - Sites for waste management and disposal and Policy SP28 - Waste-related development. These three policies set out the spatial strategy, indicative capacity requirements, site allocations and development control principles for waste management and disposal in Rutland up to 2026.

9. The current policy approach recognises that Rutland is not a significant producer in terms of waste arisings and in its capacity to facilitate development of waste management and disposal facilities. As such the focus is on the provision of preliminary and supporting facilities and helping to deliver regional self-sufficiency. The plan also supports incorporation of waste minimisation and management with other forms of development in a manner that reflects the broader spatial strategy and hierarchy. In this way the plan considers the need for waste management facilities alongside other spatial planning concerns. This approach is consistent with national policy and guidance.

The Local Plan review

10. As the WPA the County Council must plan for the management (and disposal) of all controlled waste streams produced within Rutland including: municipal waste; commercial and industrial (C&I) waste; construction, demolition and excavation (CD&E) waste; hazardous waste; and radioactive wastes.

11. Local plans must be kept up-to-date, for waste planning matters this means providing an up-to-date picture of the amount of waste we produce as well as our future arisings and management (and disposal) needs. These core elements, and other policies, need to be brought more closely in line with the NPPW. The adopted waste arisings and indicative capacity requirements were based on the best available data and policy requirements (and targets) at the time. However time has moved on with new data and information published as well as changes in the policy landscape. The Local Plan is being rolled forward to 2036 (from 2026). Simply rolling the existing forecasts forward would not prove sound as these do not capture recently released data and other information or conform to current policy requirements.

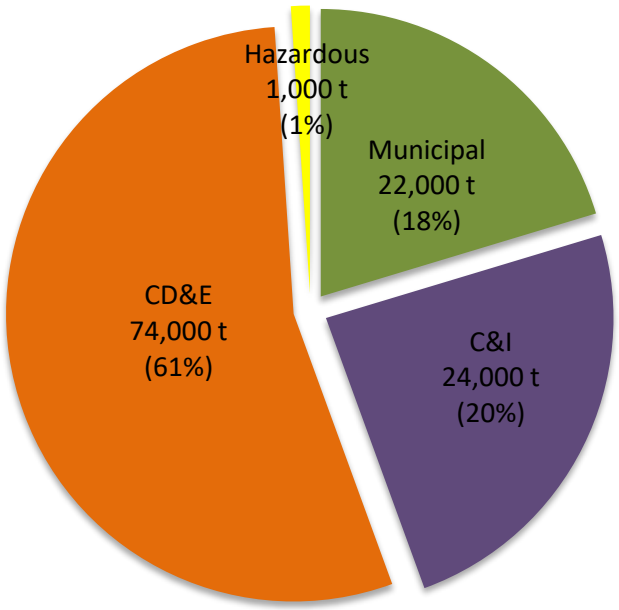
12. This Local Waste Need Assessment has been prepared to inform the plan-making process and take account of current policy requirements (including targets) as well as data and other information.

13. Where possible waste arisings will be updated on an annual basis through the Annual Monitoring Report (including the amount of waste recycled, recovered or disposed of, permitted capacity figures, take-up in allocated sites and areas).

How much waste does Rutland produce?

14. Rutland currently (2016) produces around 122,000 tonnes per annum (tpa) of various types of waste, this includes: 22,000 tonnes municipal waste (18%); 24,000 tonnes C&I waste (20%); 74,000 tonnes CD&E waste (61%); and just over 1,000 tonnes hazardous waste (1%), see figure below. Projections indicated that waste arisings could increase to 135,000tpa by the end of the plan period (2036).

Figure 1: Waste arisings for Rutland 2016 (tonnes)



15. Rutland does not produce low-level radioactive waste (LLW) from the nuclear industry. A very small amount (23m^3 or 115kg in 2007/08) of LLW from the non-nuclear industry (DECC 2008) is produced from the Leicestershire and Rutland county areas.

16. In addition the county also produces agricultural waste and wastewater.

How is waste currently managed?

17. The majority of waste produced in Rutland is exported to surrounding authorities where it undergoes processing in preparation for recycling and reuse (including composting and inert recycling), is otherwise treated or disposed of to landfill. Such arrangements are subject to commercial contracts that are largely outside the scope of the plan-making process.

18. In line with the Duty to Cooperate (DtC) strategic waste movements were identified using the EA Waste Interrogator database and local authority contracts and records. Strategic movements were defined relative to Rutland and included the following:
    - Export of waste for disposal to landfill. Reasoning: Rutland does not have any landfill sites and so is entirely reliant on capacity provided in other WPA areas and this pattern will continue over the plan period. In addition landfill void space is limited and sites cannot operate indefinitely.
    - Export of waste for treatment over 1,500tpa to an individual advanced treatment facility (e.g. energy to waste). Reasoning: Rutland's waste production is relatively small and so its ability to support larger scale treatment facilities is reduced, as such it is likely to continue to be reliant on capacity provided in other WPA areas. Movement over 1,500tpa would represent roughly 10% of all waste currently available for treatment.
    - Export of hazardous waste for recovery or treatment over 100tpa to an individual facility. Reasoning: Rutland's waste production is relatively small and so its ability to support specialised treatment facilities (e.g. those that manage hazardous wastes) is reduced, as such it is likely to continue to be reliant on capacity provided in other WPA areas. Movement over 100tpa would represent roughly 10% of all hazardous waste produced in the county.

19. As a result several WPAs and waste management/disposal sites were identified, as detailed below:

    Northamptonshire
    - Collyweston quarry, inert landfill
    - Weldon, non-hazardous landfill
    - ENRMF hazardous landfill

    Lincolnshire
    - Colsterworth, non-hazardous landfill

Peterborough

- Eye north eastern, non-hazardous landfill
- Thornhaugh, non-hazardous landfill (SNRHW)
- Dogsthorpe, non-hazardous landfill (SNRHW)

Nottingham City UA

- Eastcroft waste to energy, Nottingham

20. No issues of concern were identified regarding strategic waste movements as a result of the DtC survey.

21. Strategic waste movements from Lincolnshire County Council into Rutland were identified regarding Woolfox Quarry - inert landfill supporting restoration of an operational quarry site. Such movement is in line with adopted policy and so the Council does not consider that there are any strategic planning matters that would affect the continuation of such movements.

22. In addition other WPAs including neighbouring authorities where strategic movements were not identified, will be consulted through the normal plan-making process and any strategic issues that arise will be given due consideration.

23. At this stage no specific cross boundary issues have been identified however the Council will continue to co-operate with relevant authorities in relation to strategic waste planning matters.

Waste arisings over the plan period

24. In order to plan for provision of new capacity it is first necessary to project waste arisings over the plan period. This has been done separately for each of the waste streams (municipal, C&I, CD&E and hazardous waste) due to the different factors that drive waste arisings and affect projections. Waste arising projections for individual streams are detailed below.

25. Data from projections and forecasts is reported as rounded to the nearest 1,000 tonnes to avoid spurious precision; the exception being for municipal and hazardous waste, which are rounded to the nearest 500 tonnes and to indicate where there has been an incremental change over the plan period of up to 500 tonnes that would not otherwise be detected if reported at 1,000 tonnes. This is because data on municipal waste is more accurate and so projections have a higher level of accuracy. Hazardous waste arisings for Rutland total 1,000tpa and so it was necessary to round the data to a lower level (i.e. nearest 500 tonnes) to capture the levels of management methods at a more representative scale. Data for municipal waste is reported for financial years, whereas data reported through industry returns and surveys for other waste streams are generally for calendar years. For the purpose of the plan-making process the data will be taken to be on calendar year basis, that is data for the year 2016/17 will be taken as 2016; doing so will not significantly alter the results as three-quarters of the 2016/17 dataset is captured in 2016.

Municipal waste

26. Data used to project municipal waste arisings and forecast management methods and capacity requirements were taken from local authority records, Waste Dataflow database and Rutland's municipal waste management model (2015). The municipal waste projections incorporate increases in dwelling stock (i.e. increase in housing).

27. The forecasts for management of waste incorporate European, national (UK) and local (Municipal Waste Management Strategy 2008-2020) targets. The EU Circular Economy identifies targets for an increase in recycling rates to 65% and a decrease in disposal to 10% by 2030 (of municipal waste). Current local recycling rates are at 61% and so an increase to 65% would not be unachievable over the plan period however may be impacted on by recovery rates, which currently sit at 39%, with the disposal rate at less than 1%. Rutland has a contract with FCC Eastcroft Energy Recovery Facility in Nottingham to divert 8,500tpa from landfill to recovery (commenced April 2014). It is estimated that around 1,000 tonnes of residual waste may be produced from treatment processes.

28. The housing provision and employment land needs to be met through the St George's village garden will not add to the total identified through the Strategic Housing and Employment Land Availability Assessments. The current indicative programme for St George's has development scheduled to begin in the early part of the 2020's. In addition the Quarry Farm site, which is located in Rutland but will form part of the Stamford North development and contribute towards meeting South Kesteven's housing need up to 2036, will add a total of 650 houses on top of Rutland's need. It is thought that this provision would commence in the early part of the 2020's over a period of around six years. Overall the levels of growth will not vary significantly from previous (being around 100 additional dwelling per annum for a limited time of six years over the short to medium term of the plan period). Increases in population arising from this development have been incorporated into the municipal waste forecasts.

29. Approximately 22,000 tonnes of municipal waste arose in Rutland 2016. It is anticipated that municipal waste arisings will increase slightly (27,000tpa by 2036). Projected arising and management methods over the plan period (at five year intervals) are detailed in Table 1 below.

30. Assumptions made in projecting waste arisings for the municipal waste stream include:
    - Annual growth rate reflects housing projections (dwellings completions and projections) with an averaged waste arisings per dwelling applied to forecast future arisings.
    - Recycling / composting rates will not decrease.
    - Recovery / diversion of waste from landfill will continue as per the current contract (8,500tpa).

Table 1: Municipal waste arisings and management up to 2036 (thousand tonnes)

Year	Total	Recycling	Composting	Treatment	Disposal
2016	22	6.5	6.5	8.5	<1
2021	23.5	8	6.5	8.5	0
2026	25	9	7	8.5	0
2031	26	10	8	8.5	0
2036	27	10.5	8	8.5	0

* Management rates for 2016 reflect waste arisings reported through Waste Dataflow for the period 2016/17.

Commercial and industrial waste

31. Data used to project C&I arisings and forecast management methods and capacity requirements was derived from the following sources:

- Baseline waste tonnage – DEFRA 2014 New methodology to estimate waste generation by the C&I sector in England and DEFRA 2011 Commercial and industrial waste survey
- Breakdown of waste types and management methods – DEFRA C&I waste survey 2009, Digest of waste and resource statistics 2015, ADAS Study into C&I waste arisings 2009 and RPS & EMC Comprehensive assessment of existing and required waste treatment capacity in the East Midlands (includes waste forecast model) 2010
- Employee data – NOMIS Employees by sector for Rutland, Leicestershire, East Midlands and England
- C&I growth profile – Cambridge Econometrics 2016 East of England forecasting model 2016 baseline, Total GVA Rutland

32. The above sources were found to be the most recent data/information releases. Waste data for the C&I stream is collected through national surveys; no recent local data for C&I waste exists or is currently collected.

33. Data collected from the EA Waste Data Interrogator (EA WDI) databases was not considered representative and so has not been used. This was due to the household, industrial and commercial (HIC) field data returns not aligning with municipal waste arisings recorded via Waste Dataflow and local authority records, let alone accounting for C&I arisings as well.

34. The total waste tonnage was apportioned from a national to local level (i.e. England down to Rutland) based on the percentage of employees within commercial and industrial sectors. The C&I sector split for national and local levels were found to be comparable. The growth profile applied was derived from forecast total GVA growth. Once projected the total arisings were broken down further into broad waste types (e.g. animal and vegetable waste, chemical wastes, common sludge's etc.) based on survey findings.

35. The DEFRA and ADAS 2009 reports break waste arisings down by composition using the Substance Orientated Classification (SOC), this means that the suitability of waste types for different treatment facilities can be determined e.g. composting can only treat organic wastes. Therefore it is possible to ascertain the capacity required based on maximising recovery. The rates determined through the ADAS survey for maximising recovery are similar to the management rates reported through the DEFRA survey as such this was considered a suitable basis for developing the forecasts. Forecasts of management methods were based on maximising recovery of wastes in order to facilitate driving waste up the waste management hierarchy. Hazardous wastes were removed as these are accounted for through the hazardous waste stream. The EU Circular Economy package includes a target of recycling 75% of packing waste by 2030. Key recyclable streams are estimated to make up 21% of C&I waste. A representative breakdown of Rutland's C&I arisings by EWC code was not available. The approach applied to determine management capacity requirements for C&I waste (based on maximising recovery) satisfies the EU target, resulting in a total recovery rate of 80% by 2030.

36. No upwards adjustment has been made to the C&I forecasts with respect to St George's village garden and the Quarry Farm housing site as the development will not result in an increase in employment land from that set out in the Strategic Housing and Employment Land Availability Assessments.

37. It is estimated that approximately 24,000 tonnes of C&I waste arose in Rutland 2016, it is anticipated that arisings will increase slightly (36,000tpa by 2036). Projected arising and management methods over the plan period (at five year intervals) are detailed in Table 2 below.

Table 2: C&I waste arisings and management up to 2036 (thousand tonnes)

Year	Total	Recycling	Biological treatment (composting / AD)	Treatment	Disposal
2016	24	3	2	14	5
2021	27	4	2	15	6
2026	30	4	2	17	6
2031	33	5	3	18	7
2036	36	5	3	20	7

38. Assumptions made in projecting waste arisings for the C&I stream include:

- Apportioning waste based on employee numbers provides a representative fraction of waste arisings.
- The breakdown of waste types and fates identified through national surveys is transferrable to Rutland.
- Waste arisings growth is linked to total GVA growth.

Construction, demolition and excavation waste

39. Data used to project CD&E arisings and forecast management methods and capacity requirements was derived from the following sources:
    - DEFRA December 2016 UK statistics on waste
    - EA Waste Data Interrogator database 2010 - 2016
    - WRAP 2010 CD&E waste arisings, use and disposal for England 2008
    - DCLG 2007 Survey of arisings and use of alternatives to primary aggregates in England, 2005. Construction, demolition and excavation waste.
    - ODPM 2005 Survey of arisings and use of construction, demolition and excavation waste as aggregate in England in 2003.
    - EA 2000 Strategic Waste Management Assessment, East Midlands 2000
    - DCLG 2017 Housing supply: net additional dwellings dataset
    - Rutland County Council 2017 Strategic Housing Market Assessment (SHMA) Update
    - Rutland County Council 2015 Housing supply background paper
    - Leicestershire 2014 SHMA
    - Peterborough 2014 SHMA

40. Previous national surveys undertaken for CD&E waste provide broadly comparable datasets for the years 1998, 2003 and 2005. These surveys do not drill-down to individual WPA level. Statistical surveys capture Rutland under the Leicestershire statistical area; in order to apportion waste arisings to a local level Rutland's proportion of the housing growth was applied (3.46%). This method suggests around 50,000 tonnes of CD&E waste was generated within Rutland in 2005. More recent datasets have been released and so these previous surveys no longer form the most up-to-date and best available data.

41. The WRAP study under taken in 2010 estimated CD&E waste at a national level, this indicated arisings of 94.5, 76.9 and 77.4 million tonnes for 2008, 2009 and 2010. The study estimated management methods of: treatment and transfer 9%, recycled 55%, re-use or recovery on exempt sites 11% and disposal to landfill 25%. It is estimated that over three quarters of CD&E waste entering treatment and transfer underwent some form of recovery. Again this study does not drill-down to individual WPA level, however does provide a useful picture regarding broad waste management methods.

42. More up-to-date national datasets were recently published (DEFRA December 2016), providing national estimates for 2014. National estimates for construction and demolition (C&D) waste arisings are set out in the DEFRA 2016 UK statistics on waste (Table 3.1[1]). Arisings for Rutland were determined as a percentage of the total estimated C&D arisings for England based on the proportion of construction activity (dwelling completions) attributed to Rutland (0.13%). This method produced a figure of 65,000 tonnes for 2014. This figure was extrapolated forward using growth factors based on dwelling completions for the period 2014 to 2016 and forecast housing supply figures from 2017 onwards. The outcome of which indicated that around 63,000 tonnes of CD&E was generated in 2015 increasing to around 74,000 tonnes in 2016. Housing supply figures indicate that there will be a decrease in planned completions from around 220-250 in recent years to an annual rate of around 160 per annum over the plan period, with a temporary increase (for around six years) in the early 2020's totalling around 200 for the first year and 250 per annum thereafter, reflecting development of the Quarry Farm site. Fluctuations in dwelling completions may be reflected in CD&E arisings, however the exact quantum and correlation between these factors is not certain; as such a reduced figure of 70,000tpa has been applied from 2017 onwards. Sensitivity testing was undertaken, following annual percentage increase/decrease in dwelling completions was applied, this produced results of 74,000 decreasing to 46,000, then increasing to 60,000 and 74,000, and back down to 46,000tpa (averaging 56,000tpa).

43. National statistics (2016) also include figures for backfilling (taken as inert recovery and fill) indicating a rate of around 44% and total recovery of around 91%; producing a figure of around 47% for recycling and treatment (when backfilling is subtracted from total recovery). The remainder is assumed to be disposal to landfill (9%). Previous surveys and studies indicate that of the waste managed via recycling and treatment processes, the majority can be attributed to recycling (up to 90%), this produces rates of 43% for recycling and 5% for treatment. These rates have been applied to the forecast for CD&E.

44. CD&E waste "as managed" is reported through the EA WDI, around 60,000 tonnes has been reported as being generated from Rutland over the last few years. Of this around 45,000 tonnes was deposited to land as part of restoration works at quarries within the county and the remainder was otherwise recovered (through recycling and/or treatment processes). This is higher than the rate identified for inert recovery/fill using the national management rates however where such increases contribute towards the overall recovery rate and divert waste from disposal to landfill there is not considered to be any conflict. It is widely acknowledged that a significant quantity of CD&E waste is recycled and/or re-used onsite and on registered exempt sites; this unseen capacity is not captured through the EA WDI database and so this dataset may underestimate arisings.

[1] Note C&D estimates in Table 3.1 exclude excavation wastes.

45. The estimate of 70,000tpa produced from the most recent national figures are higher than those reported through the EA WDI however the difference may reflect the unseen capacity, giving a more rounded picture of arisings. For the purpose of the plan-making process and identifying future management needs this unseen capacity has been taken to be the difference between the national recovery rate and that reported through the EA WDI, around 17,000tpa, and is taken to continue to be available throughout the plan period.

46. The Waste Framework Directive sets a target for 70% of construction and demolition waste to be recycled (preparing for re-use and recycling) or otherwise recovered by 2020. Current rates reported through the EA WDI 'as managed' indicate that this target has been achieved with 100% of inert waste recycled or otherwise recovered.

47. The above review of available data demonstrates that data on CD&E waste is relatively poor at a sub-regional level; this means that there may be insufficient basis for making confident forward projects of arisings. In addition the level of construction within Rutland is not likely to be any greater in the future than experienced previously (including during periods of economic growth), for these reasons it may be best to take a conservative approach. Given this, the assumption that net arisings of CD&E waste will remain constant over time may be the most suitable approach and may reflect in part the impact of the landfill tax and the Aggregates Levy, which will encourage the re-use of CD&E waste on site in order to avoid additional disposal and raw material costs. Due to reduced confidence in forward projections of CD&E arisings a no growth scenario has been applied.

48. It is estimated that approximately 70,000 tonnes of CD&E waste is currently generated in Rutland, it is anticipated that arisings will remain the same over the plan period. Of this, around 17,000tpa is recovered either onsite or at exempt sites, it is assumed that this unseen capacity will to continue to be available throughout the plan period.

49. Projected arising and management methods over the plan period (at five year intervals) are detailed in Table 3 below.

Table 3: CD&E waste arisings and management up to 2036 (thousand tonnes)

Year	Total	Inert recycling	Treatment	Inert recovery / fill	Disposal
2016*	74	12	0	45	0
2021	70	13	3	31	6
2026	70	13	3	31	6
2031	70	13	3	31	6
2036	70	13	3	31	6

* Management rates for 2016 reflect waste arisings 'as managed' and reported through the EA WDI 2016.

50. The Environmental Permitting Regulations 2010 recognise that the deposit of inert waste onto land may constitute recovery in some cases. As such inert recovery and fill are captured jointly with other forms of recovery (i.e. recycling and treatment) identified separately.

51. Assumptions made in projecting waste arisings for the CD&E stream include:
    - Apportioning waste based on dwelling completions and housing growth rates provides a representative fraction of waste arisings.
    - The breakdown of waste types and management rates identified through national surveys is transferrable to Rutland.
    - Net arisings of CD&E waste will remain constant over time.
    - The unseen management capacity mainly constitutes reuse and recycling capacity and will continue to be available throughout the plan period.

Hazardous waste

52. Data on hazardous wastes is relatively precise, reported through the EA's Hazardous Waste Data Interrogator (EA HWDI) database, which holds information on the arisings, movements and management. This database forms the most reliable source for hazardous waste data arisings and has been used for identifying arisings and management rates. Reporting of hazardous waste managed may include some double counting as wastes are reported through both transfer and treatment facilities (i.e. each movement may be reported). Waste identified as 'transfer before recovery or disposal' was apportioned to either recovery or disposal as appropriate. Outlier data was subtracted as such figures were considered to likely be related to a once-off project and hence would not be reflective of ongoing patterns.

53. The production of hazardous waste is linked to commercial and industrial business activities, and so is likely to have similar growth patterns. For this reason hazardous waste has been projected forward using the same growth profile for C&I waste.

54. It is estimated that just over 1,000 tonnes of hazardous waste arose in Rutland 2016, it is anticipated that arisings will increase (very) slightly over the plan period. Projected arising and management methods over the plan period (at five year intervals) are detailed in Table 4 below.

Table 4: Hazardous waste arisings and management up to 2036 (thousand tonnes)

Year	Total	Recycling (recovery)	Treatment	Landfill
2016	1.5	1	<0.5	<0.5
2021	1.5	1	<0.5	<0.5
2026	1.5	1	<0.5	<0.5
2031	2	1	<0.5	<0.5
2036	2	1.5	<0.5	<0.5

55. Assumptions made in projecting waste arisings for hazardous waste include:
    - Hazardous waste is linked to commercial and industrial business activities and shares the same growth profile.
    - Current management rates are reflective of future rates.

Agricultural wastes

56. Little is known of waste arisings within the agricultural sector. The majority of agricultural wastes are not classified as controlled wastes, however non-natural agricultural wastes are included under the WFD. This component accounts for a very small amount (<1%) and is thought to be managed via the use of household collection or civic amenity sites and transfer to others (contractors). As such the non-natural component of agricultural waste is likely to be captured under either trade waste received at civic amenity sites or within the C&I waste streams where transferred to others.

57. Given the uncertainty regarding both arisings data and management a constant level of waste arisings has been assumed.

Low level radioactive waste

58. Radioactive wastes are produced in the UK as a result of the generation of electricity in nuclear power stations and from the associated production and processing of the nuclear fuel (including decommissioning of plant), from the use of radioactive materials in industry, from the extraction of naturally occurring radioactive materials (NORM), medicine and research, and from military nuclear programmes. In the UK, the majority of radioactive waste is from the decommissioning of nuclear power reactors. It is essential that all radioactive wastes and materials be safely and appropriately managed in ways that pose no unacceptable risks to people or the environment.

59. Radioactive waste is divided into categories according to how much radioactivity it contains and the heat that this radioactivity produces, the main categories include: High Level Waste (HLW), Intermediate Level Waste (ILW) and Low Level Waste (LLW).

60. LLW is mainly comprised of building rubble, soil and steel items such as framework, pipework and reinforcement from the dismantling and demolition of nuclear reactors and other nuclear facilities and the clean-up of nuclear sites. However, at the present time most LLW is from the operation of nuclear facilities, and is mainly paper, plastics and scrap metal items. The Policy for the Long Term Management of Solid Low Level Radioactive Waste in the United Kingdom (2007) allows for the disposal of some types of LLW to existing landfill. The disposal of such waste to existing landfill is regulated by the EA under the Environmental Permitting Regulations. ILW and HLW are not suitable to be disposed of in the same way as LLW. This policy direction is reflected through the UK Strategy for the Management of Solid Low Level Radioactive Waste from the Nuclear Industry (2016).

61. Rutland does not produce LLW from the nuclear industry. A very small amount ($23m^3$ or 115kg in 2007/08) of LLW from the non-nuclear industry (DECC 2008) is produced from the Leicestershire-Rutland sub-region.

Waste movements

62. Rutland's waste management capacity is limited and there are no non-hazardous landfills in the county, this means that the majority of waste produced in Rutland is exported to other authority areas for management and disposal.

63. The EA WDI provides a general idea of waste movements. Data returned from the EA WDI indicates that around 100,000tpa of waste was managed and/or disposed of in Rutland in 2016; around 40% of which can be attributed to Rutland.

64. Waste imported to Rutland is predominantly inert waste that is disposed of at operational mineral extraction sites in line with restoration works, the main origin of which in recent years has been Lincolnshire. Some smaller movements into Rutland also occur from surrounding authorities in preparation for reuse and recycling. In addition Ketton uses refuse derive fuel (RDF) from Leicestershire (however this is not classified as waste as it has already been processed into fuel pellets).

65. The remaining waste produced in Rutland (some 60,000+tpa) is exported for management and/or disposal. WPAs recorded as receiving waste from Rutland are Birmingham, Leicestershire, Leicester City, Lincolnshire, Northamptonshire, Nottinghamshire, Nottingham City, Peterborough and Warwickshire.

66. Overall Rutland is a net exporter of waste and this pattern is likely to continue, however the plan seeks to reduce Rutland's reliance on other WPAs by facilitating delivery of increased capacity particularly for small scale preliminary facilities. The plan also recognises that viability for a small-scale advanced treatment facility may increase over the plan period and supports such development where in line with relevant Local Plan policies.

Rutland's existing waste management capacity

67. Waste management facilities in Rutland include one waste transfer station, two civic amenity sites, 22 'bring' recycling sites, one open windrow composting site, two metal recycling facilities, three inert recycling sites and one inert fill site (associated with the restoration of a quarry). Ketton cement works is permitted to utilise alternative fuels, which includes waste derived fuels (currently sourced from Leicestershire).

68. The estimated available capacity of facilities within Rutland in 2016 is 3,500tpa composting, 7,000tpa metal recycling and 30,000tpa inert recycling / processing (tied to the operational life of mineral extraction operations with permissions expiring between 2015 and 2020). Inert waste was disposed of at one site in 2016 (65,000 tonnes), in addition permission was granted in 2016 for infilling of 1.26 Mt of inert waste for restoration purposes over the period 2020 – 2034 at Woolfox Quarry (assumed average annual rate of 84,000tpa). The civic amenity and waste transfer sites are intermediate facilities that provide a supporting function and have a combined capacity of around 12,000tpa.

69. It should be noted that inert wastes can be recycled or re-used onsite and on registered exempt sites (e.g. as an engineering material in site road-making or as a restoration and cover material); it has been assumed that this will continue to occur.

70. Data returned from the EA waste interrogator indicates an operational capacity of around 100,000tpa the majority (65%) of this is attributed to inert fill (restoration of quarries), the remainder is attributed to intermediate facilities, inert recycling, metal recycling and composting.

71. A study into potential capacity, 'Comprehensive Assessment of Existing and Required Waste Treatment Capacity in the East Midlands (2010)', was undertaken (by RPS) for the East Midlands Councils. The proven management capacity (not including disposal) for Rutland was 9,500tpa associated with intermediate facilities and sites for preparing for reuse and recycling.

72. Permitted and actual or operational capacity can vary significantly; this is due to a range of factors including market drivers and operational efficiencies. Permitted capacity is most commonly the best available data due to commercial confidentiality, as such this is the data applied in this assessment.

73. Article 28 of the Waste Framework Directive requires an assessment of how the current waste management and disposal capacities will shift over time in response to the closure of existing waste management and disposal facilities and the need for additional waste installation infrastructure. The need for the closure of existing waste management and disposal facilities was investigated, by the Council, by contacting the Environment Agency and waste industry. The result of which was inconclusive; no sites were identified as being suitable for closure. In lieu of information regarding planned closures the permitted end date has been applied in determining how capacity will fluctuate over the plan period and the resulting indicative capacity gaps (Table 5).

Future capacity requirements

74. Waste arisings will increase over the plan period (estimated at 135,000tpa by 2036); this will in turn require increased waste management and disposal capacity. The table below identifies the existing arisings and capacity and compares this with future requirements[2]. The capacity gap is the difference between the existing capacity and future requirements. The capacity gap can be met either by an increase in capacity at existing sites or development of new sites where compliant with the Local Plan.

[2] Future capacity requirements do not include residual arisings produced from other management processes; it is estimated that such residual matter could account for up to an additional 5,000tpa however this is highly dependent on the processes employed, waste composition (including calorific value) and operational efficiency of individual plant/facility.

Table 5: Comparison of current and future waste management and disposal requirements (thousand tonnes per annum)

Management / disposal method	*Estimated capacity 2016*	Indicative capacity requirement / Capacity gap (future need) 2016	2021	2026	2031	2036
Preparing for reuse and recycling	*7*	10 / -3	12 / -5	13 / -6	15 / -8	16 / -9
Biological processing	*4*	9 / -5	9 / -5	10 / -6	10 / -7	11 / -8
Inert recycling and soil treatment	*29*	12 / +17	16 / +8	16 / -16	16 / -16	16 / -16
Advanced treatment	*0*	22 / -22	24 / -24	25 / -25	27 / -27	29 / -29
Inert recovery/fill	*65*	45 / +20	31 / +53	31 / +53	31 / +53	31 / -31
Disposal	*0*	5 / -5	12 / -12	12 / -12	13 / -13	13 / -13
Total waste arisings *(excludes hazardous wastes)*		120	120	125	129	133

75. The revised indicative capacity requirements are less than those set out in the Core Strategy DPD, but still generally within the identified range. This is due to recently released data, revised targets and information providing an updated view of arisings and emerging trends which indicate that overall (nationally) waste arisings and growth rates may be lower than previously thought.

The need for additional capacity/facilities

76. In line with the policy approach of focussing on preliminary and supporting facilities by the end of the plan period it is estimated that there will be a need for: one small-scale materials recycling facility; one small to medium scale composting or anaerobic digestion facility; and one small-scale inert recycling or soil treatment facility.

77. The plan allocates three sites for waste management at Cottesmore, Greetham and Ketton. The Cottesmore site was brought forward and granted planning permission (for the use identified in the allocation). This leaves one existing allocation for small-scale preliminary facilities at Greetham, and one for inert recovery/fill at Ketton Cement Works and its quarry. Landowners for both sites have indicated their ongoing support for the allocations. Revised forecasts indicate that around three additional facilities (depending on scale) could be required by the end of the plan period to deliver the additional capacity requirements for preparing for reuse and recycling, and biological processing. Unallocated sites are able to come forward where in line with the spatial strategy and development criteria.

78. The existing contract for municipal waste treatment reduces the future advanced treatment requirements by 8,500tpa, leaving around 20,000tpa; this is currently likely to be insufficient to support development of a treatment facility. As such the export of waste for advanced treatment (e.g. Energy from Waste) and disposal is likely to continue, however the viability of such technologies (at a small-scale) may increase over the plan period or where the facility is ancillary to an industrial operation and used to produce fuel or energy, as such the plan enables sites to come forward where compliant with Local Plan policies.

79. The plan sets a preference for the deposit of inert waste to land as a recovery operation where tied to the restoration of permitted or allocated mineral extraction sites. One such site is allocated in the adopted plan for inert recovery / fill, in addition the current estimated void space of existing quarries is more than arisings hence it is unlikely that additional inert disposal sites will be required during the plan period that are not associated with the restoration of permitted or allocated mineral extraction site.

80. The adopted plan states that Rutland is not considered an appropriate area to accommodate large scale advanced treatment facilities, new landfill site(s), hazardous waste management facilities or inert disposal not associated with restoration of permitted or allocated mineral extraction site. There have been no changes in local circumstance or national policy that warrants amendment to this policy approach.

Appendix 1: Compliance checklist – Waste Framework Directive

The schedule below sets out how the Council complies with the Waste Framework Directive as per the Guidance for local planning authorities on implementing planning requirements of the European Union Waste Framework Directive (2008/98/EC).

Does the Local Plan ...	Yes / No	Evidence
Set out how the key planning objectives in national policy, including the waste hierarchy, will be delivered?	Yes	Local Plan vision, objectives and policies Local assessment of waste management needs
Provide an assessment of existing and future generation of waste arising over the plan period?	Yes	Local waste management needs assessment Local Plan waste planning matters section
Identify where the waste will be managed?	Yes	Local Plan Policy - Spatial strategy for waste management Local Plan Policy - Allocations for waste-related development
Consider and clearly identify waste management capacity from existing waste management facilities?	Yes	Local waste management needs assessment Local Plan waste planning matters section
Consider and clearly identify future capacity from existing waste management facilities?	Yes	Local waste management needs assessment Local Plan waste planning matters section
Identify the number and type of waste management facilities required - including existing facilities - along with specific sites or broad locations?	Yes	Local Plan waste planning matters section Local Plan Policy - Spatial strategy for waste management Local Plan Policy - Allocations for waste-related development Proposals Map Local waste management needs assessment

As evidenced in the compliance checklist above, the Local Plan is complaint with the requirements set out through the Waste Framework Directive.