



22nd June 2021

Agenda Item: 7

REPORT OF CORPORATE DIRECTOR – PLACE

RUSHCLIFFE DISTRICT REF. NO.: 8/20/01826/CTY

PROPOSAL: PROPOSED DEVELOPMENT OF THE EAST MIDLANDS ENERGY RE-GENERATION (EMERGE) CENTRE (A MULTIFUEL ENERGY RECOVERY FACILITY, RECOVERING ENERGY FROM WASTE MATERIAL) AND ASSOCIATED INFRASTRUCTURE.

LOCATION: RATCLIFFE-ON-SOAR POWER STATION, RATCLIFFE-ON-SOAR, NOTTINGHAM, NG11 0EE.

APPLICANT: UNIPER UK LIMITED

Purpose of Report

1. To consider a planning application for the development of an Energy Recovery Facility, referred to by the applicant as The EMERGE (East Midlands Energy Re-Generation) facility on land within the Ratcliffe on Soar Power Station complex. The facility would have a design capacity of circa 472,100 tonnes of residual waste per year, but there is potential for this to be as high as 524,550 tonnes dependant on the calorific value of the incoming waste.
2. The determination of the planning application raises some complex planning issues which require detailed assessment and careful judgement against both national and local planning policy to identify the level of weight that should be given to each issue to make a balanced assessment of the wider planning issues.
3. Key issues considered within the report relate to:
 - I. The processing capacity of the facility in relation to the amount of residual waste requiring treatment within Nottinghamshire and the surrounding area where it is identified that there are shortfalls in residual waste processing capacity which the EMERGE facility would assist in addressing;
 - II. Compliance with the waste hierarchy where it is concluded that the EMERGE facility would assist in managing waste at a higher level in the waste hierarchy and assist in the diversion of waste from landfill disposal;

- III. The efficiency of the process, its level of carbon emissions and the extent to which the development would contribute towards the UK Government's commitment to bring all greenhouse gas emissions to net zero by 2050 which is a target which local authorities are being encouraged to work towards where it is concluded that the EMERGE facility would contribute to a reduction in carbon emissions when compared to the current alternative of landfill disposal of residual waste, but acknowledging that potential future changes in waste collection arrangements have the potential to affect waste composition which may erode some of these benefits in the medium to longer term;
 - IV. The production of 'low carbon' energy from the process which is strongly supported by national and local planning and energy policy;
 - V. The suitability of the site for the development in the context of planning policy where it is concluded that there is planning policy support for the redevelopment the Ratcliffe on Soar Power Station site which is a previously developed (brownfield) site.
 - VI. The site lies within the Green Belt and has been treated as inappropriate development in the context of Green Belt policy. Very special circumstances have been demonstrated to support a grant of planning permission.
 - VII. Consideration of the environmental effects of the development where it is noted that there would be some visual and heritage impacts but in other respects the site benefits from good transport links with direct access to the A453 dual carriageway and significant environmental effects are not anticipated to local landscape character, air quality and public health, noise and vibration, dust, litter, ecology, odour, ground contamination, drainage and flood risk, or socio-economic effects.
4. The recommendation is to grant planning permission subject to the applicant entering into a legal agreement to secure the retention of the rail head and to regulate lorry routing and subject to the conditions set out at Appendix 1.

The Site and Surroundings

- 5. The wider Ratcliffe on Soar Power Station site covers an area of circa 273 hectares (ha) (see Plan 1) and is split by the A453 Remembrance Way. The entirety of the site is located within the Green Belt.
- 6. The land to the north of the A453 Remembrance Way includes circa 167ha of land and incorporates the main built elements of the Power Station and its related infrastructure. The land to the south of the A453 is used for the handling and storage of by-products, predominantly ash.
- 7. The 167 ha Northern Site sits broadly at 30–38 m above ordinance datum (AOD) and is bounded by (see Plan 2):

- a. Wood Hill and Wright's Hill to the north which extends to a height of circa 75 m AOD, beyond which is the village of Thrumpton and the River Trent;
 - b. The A453 to the east, beyond which, on rising land, is a mixture of agricultural land and woodland;
 - c. The A453 to the south, beyond which, at broadly the same level as the site, is the southern Power Station site followed by a mixture of agricultural land and woodland, which also contain the pylons and overhead transmission lines from the Power Station; and
 - d. Immediately to the west, the main East Midlands main line railway and Parkway Station (including its associated Park and Ride facility), beyond which is more agricultural land containing the River Soar, a tributary of the River Trent, and a Marina. Further west still, at just over 2 kilometre (km) distance, is the M1 and its Junctions 24 / 24a.
8. The nearest residential properties are Winking Hill Farm, located circa 750m to the south, and, at approximately the same distance, properties in the village of Thrumpton beyond Wright's Hill to the north-east.
9. The Northern Site (which the application site forms part of) is dominated by a wide range of large-scale built development and structures, none of which fall within the red line planning boundary, including:
 - A centrally located Boiler House with, immediately to the north, the Flue Gas Treatment (FGT) facility. These two elements are interconnected through a series of large ducts which ultimately connect to a 199 m high concrete stack;
 - A building containing the generating facility with a second concrete stack that extends to 95 m in height;
 - Eight concrete cooling towers (each 114 m high) which are located on the western part of the site;
 - A range of storage buildings, including for gypsum, some of which are interconnected via high level conveyors;
 - Two large substation buildings (400 kV and 132 kV) owned and operated by National Grid as part of the electricity distribution network;
 - Its own railway line (off the East Midlands main line) which runs in a loop between the Electrostatic Precipitators and FGT facility and around the coal stockpile area, which sits on the eastern side of the site. The line includes sidings, associated unloading infrastructure and conveyor belts; and
 - Other buildings, including offices, an engineering academy, engineering services and stores; plus other infrastructure such as roadways, car parking, laydown / storage areas, lagoons and soft landscaping.
10. The main entrance to the Northern Site is at the south-western corner of the site, by way of an unnamed road which provides a connection, via a grade

separated interchange, to the A453. A second access for heavy goods vehicles (HGVs) is via a further grade separated junction off the A453 on to Barton Lane, which is signed as the Power Station HGV entrance (see Plan 3). This entrance is located at the south-eastern end of the Power Station site. The A453 Remembrance Way is a dual carriageway and is subject to a 70mph national speed limit. It forms part of the strategic road network and is therefore managed by Highways England. Around 4.2 km to the south-east the A453 intersects with the M1 motorway at junction 24.

11. The proposed development would be located at the central northern end of the Northern Site, on an open area covering circa 4 ha. The development site does not incorporate any buildings and has historically been used as a car park for contractors working at the power station as well as a machinery laydown area. It is surfaced with a mixture of tarmac and compacted stone hardstanding and bounded to the north and east by the electrified power station perimeter security fence and to the south and west by a combination of large-scale development associated with the power station, and a further open area formerly used by contractors.
12. The application site falls within Flood Zone 1 (the lowest category of flood risk), is not directly constrained by any statutory or non-statutory ecological designations, nor does it contain or form part of any designated heritage asset, such as scheduled monuments or a listed buildings. The power station buildings are recorded as a non-designated heritage asset. Within a 3km radius of the site there are seven Scheduled Monuments, fifty-eight Listed Buildings, four Conservation Areas and a Grade II Registered Garden.
13. In terms of ecological designations in the wider area, there are no European designated sites within a 10 km radius of the development site. There is one Site of Special Scientific Interest (SSSI) (Lockington Marshes SSSI) and one Local Nature Reserve (LNR) (Forbes Hole LNR) within 2Km of the development site. There are 40 Local Wildlife Sites within 2km of which two are within 1km of the development site, these are Thrumpton Park LWS, located around 0.19 km to the north-north-west and Red Hill, Ratcliffe on Soar LWS, located around 0.74 km to the west-north-west. There are no ancient woodlands within 2km of the site.
14. In terms of cultural heritage designations in the wider area there are seven scheduled monuments within the 3 km of the site, fifty-eight listed buildings, six of these being Grade I and II* listed buildings, five conservation areas lay completely, or partially, within the 3 km Study area, these are Thrumpton Conservation Area c.200 m north of the site, Trent Lock Conservation Area c.1.25 km to the northwest of the site, Long Eaton Sheet Stores Conservation Area) c.2.07 km north-west of the site, Long Eaton Town Centre Conservation Area, c.2.84 km north north-west of the site and Sawley Conservation Area c.2.85 km west north-west of the site. The Grade II Listed Kingston Park Pleasure Gardens lies within 3km of the site. Ratcliffe-on-Soar Power Station is a non-designated heritage asset of local importance.

15. In terms of landscape designations, the site is located predominantly in National Character Area 74: Leicestershire and Nottinghamshire Wolds with a small section in the Trent Valley Washlands NCA 69. At a regional level the site is situated in the Clay Wolds Regional Landscape Character Type 8. At a County level the site is located predominantly in Policy Zone Nottinghamshire Wolds 02 – East Leake Rolling Farmland with a small section in the north, north-east and east of the site in Policy Zone Nottinghamshire Wolds 01 – Gotham and West Leake Hills and Scarps.
16. There are no public rights of way within the development site, but Thrumpton Footpath 9 crosses the access road, leading to Footpath 8 & 1 which then links to the cyclepath. The signed cycle route uses Barton Lane (as quiet road) and continues on the cycle path at the point where FP 8 starts and runs alongside the A453 off-slip and south side of the Power station site to the access roundabout. Both routes cross the access road at a similar point.
17. Nottingham East Midlands Airport is located approximately 5km to the south-west of the application site and the site is therefore within the 13km airport safeguarding zone.

Background

18. The coal-fired Power Station was constructed in the 1960s and commenced commercial operations in late 1967. It has an export capacity of approximately 2,000 megawatts of electrical power and is fitted with Flue Gas Desulphurisation and Selective Catalytic Reduction. At present, the power station operates under a 'Capacity Market' contract, and it is operated to meet commercial trading requirements in addition to being available to National Grid to support reliable operation of the power network. In accordance with the UK Government's coal phase-out strategy it is planned to cease operations before October 2025.
19. Following its closure it is envisaged that the power station will be demolished. However, a significant quantum of development would be retained on the site including:
 - The 400 kilovolt (kV) and 132 kV substations and associated power lines and pylons;
 - The 35 MW Gas Turbine (GT) generating facility, which has its own independent gas oil-fired system and 95m high concrete stack, and also has its own contract to supply power to the grid at times of demand in addition to providing capability to restore power in the event of a total or partial shutdown of the national electricity transmission system;
 - Various offices and stores, including the offices for Uniper's Technology Centre and its Engineering Academy;
 - The site's rail line, sidings and associated infrastructure; and

- Other essential site infrastructure such as the road access points and drainage systems, including the surface water lagoons.

Proposed Development

20. Planning permission is sought for a multifuel Energy Recovery Facility ('ERF'). The facility would recover energy from waste materials using a twin line combustion plant.
21. The facility would utilise non-hazardous residual commercial and industrial wastes and local authority collected wastes. The waste would be delivered to the Ratcliffe site either in an unprocessed form or as refuse derived fuel (RDF) manufactured at waste transfer stations off-site. It would also have the potential to treat the combustible fraction of construction and demolition (C&D) waste and is also intended to be capable of accepting certain waste biomass fuels. The anticipated annual throughput of the facility would be circa 472,100 tonnes per annum, but consideration has also been given to the environmental effects that would result from the maximum theoretical operational capacity of the plant of 524,550 tonnes of waste per year, which may occur if the calorific value of the waste delivered to the site was lower or the periods of expected down time were reduced.
22. The proposed development would generate electricity by way of steam turbines which would be driven through the controlled combustion of residual waste. The gross power generating capacity of the EMERGE facility would be 49.9 megawatts, this is just below the 50 megawatts threshold whereby an energy generating development would be deemed to be "nationally significant" and consent for the facility would be required from the secretary of state as a Nationally Significant Infrastructure Project. After subtracting the power used to run the facility itself, it would have the ability to export approximately 43.4 megawatts of electrical power to the local electricity grid. This electricity is classed as 'low carbon' energy but a significant proportion of the energy mix would be generated from renewable sources. This electricity is sufficient to meet the average annual domestic demand of about 90,000 homes. In addition, the facility is capable of providing heat in the form of steam (or possibly hot water) for use by local heat users and, potentially via heat exchangers, a cooling network. However, no markets for the export of this heat have currently been entered into and there are no firm commitments regarding an identified market for the residual heat at this present time.
23. The main building of the EMERGE Centre would have a maximum roof height of up to 49.5m, would be 178 m long and typically circa 73 m in width. However, due to the overall scheme design incorporating two perpendicular blocks, with the Administration Offices extending (circa 76 m) to the east and the Turbine Hall extending (circa 32 m) to the west, at its widest point the building extends to circa 181 m (see Plan 4). Elevation drawings of the main building can be found in Plans 5-8.

24. The building would be subdivided into various process areas running north to south. These areas include:
 - a. Waste Reception Hall which extends to a height of 20 m to the parapet;
 - b. Waste Bunker Hall which extends to a height of 35 m to the parapet;
 - c. Boiler Hall has two levels: the boiler extends to a height of 49.5 m and the tapered facade extends to a height of 45 m to the parapet. Items of rooftop equipment would extend circa 2 m above the roof;
 - d. Turbine Hall (located immediately to the west of the boiler hall) which extends to a height of 25 m to the parapet; and
 - e. Flue Gas Treatment facility which extends to a height of 35 m to the parapet.
25. The twin side by side stacks would protrude through the Flue Gas Treatment facility roof and extend to a height of circa 110 m. Each stack would be circa 2.25 m in diameter, braced together near the top and include an external continuous emissions monitoring system platform.
26. The air-cooled condenser is proposed to be located to the west of the main building and north of the Turbine Hall. It would comprise a separate structure in order to ensure sufficient air flow through the units. The air-cooled condenser would be circa 60 m long, circa 30 m wide. The units would be supported by metal columns with the underside of the cladding set at 10 m and extending to a height of 25 m. It would be connected to the Turbine Hall via ductwork.
27. The administration offices would extend circa 76 m from the eastern elevation of the main building, off the Boiler Hall. The offices would be elevated above ground level and extend to a height of circa 20 m to the parapet. Floorspace would be provided over two levels (set at 10 m and 14.5 m) with access achieved from ground level by an entrance foyer at the eastern end of the building.
28. A standalone workshop building is proposed to be located to the east of the main building and north of the Administration Offices. The workshop would be circa 47 m long, 19 m wide and extend to a height of circa 10 m to the parapet.
29. There would be external tanks / containers for the storage of ammonia and fuel, but the main air pollution control residue silos would be located internally. In addition, there would be an external fire water tank and pump house. Other supporting infrastructure would include an electricity connection compound, combined heat and power (CHP) building, roads, car parking and a gatehouse / weighbridge complex, substation (within its own enclosure), service connections, surface water drainage, lighting and CCTV, and new areas of hard and soft landscaping.
30. The overall construction period for the proposed development would last circa 36 months, with an anticipated opening date of December 2024. The

development would have a design life of approximately 30 years, although in reality many elements would last beyond this period and ongoing repair, refurbishment and replacement of plant and machinery would ensure the facility would be a permanent development.

31. The proposed development would represent a capital investment of circa £330 million during construction, with 600 construction worker jobs at the peak period of construction. Once operational, the EMERGE facility would create 45 new permanent full-time jobs and it is expected that there will be a further circa £18.8 million of spending each year in terms of operations and maintenance, including consumables and residue management costs.
32. The facility would operate on a 24-hour basis, 7 days a week.
33. Vehicular access for both construction and operational phases would be provided via the existing dumb-bell grade separated junction off the A453 Remembrance Way on the south-eastern end of the power station site. From this junction an unnamed road leads directly to the perimeter access barriers for the power station, circa 115 m from the roundabout. Once beyond the access barriers an existing internal tarmac access road leads to the development. It is proposed that waste deliveries would take place 24 hours, 365 days per year, although in practice most HGV movements would occur during weekdays between 07:00 and 17:00 (97% of overall deliveries).
34. The traffic assessment has been carried out on the basis that all deliveries would be undertaken by road and uses a maximum throughput tonnage of 524,550tpa to ensure robustness and 'worst case scenario'. At this level, the operation of the EMERGE facility would generate an average 309 HGV two-way movements a day, consisting of 236 associated with waste imports, 71 associated with the export of ash and recovered metals and 2 associated with the import of consumables.
35. The power station site includes its own railway sidings which connect into the East Midlands mainline. These facilities would be retained and offer the potential for rail deliveries to occur in the future, in the event that operational contracts are secured.
36. The planning application is accompanied by an Environmental Statement prepared in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations'). The Environmental Statement incorporates a comprehensive assessment of the potential significant environmental effects including consideration of the alternatives considered, landscape and visual effects, ecology and nature conservation, noise, air quality including consideration of the level of carbon and greenhouse gas emissions and human health, ground conditions, surface water and flood risk, transport, socio-economics, archaeology and cultural heritage, cumulative effects and a conclusion.
37. Following the receipt of planning consultation responses and officer assessment of the original submission it became apparent that further

supplementary information and clarification of data was required to ensure that the Environmental Statement provides a full assessment of the potential environmental effects of the development. This supplementary information has been provided through two separate submissions made under Regulation 25 of the EIA Regulations.

38. The first Regulation 25 submission incorporates supplementary technical information in relation to airport safeguarding, ecological issues, heritage issues, landscape and visual impact and correction of numeric data in the air quality assessment. Clarifications have also been provided relating to the assessment of regional waste management capacity and the design of the buildings.
39. The second Regulation 25 submission provides supplementary information in relation to the installation of the proposed electrical grid connection and the proposed demolition of the two cooling towers, explaining how these works would be undertaken and giving consideration to the likely environmental effects associated with these works.
40. The grid connection cable would be installed within a buried underground trench located under internal roadways, a gravel track and areas of regularly mown grass on land wholly within the perimeter security fence of the Power Station between the existing 11/132 kV Transformer Compound and Substation and the EMERGE facility, circa 1350m in length. Planning permission is not currently sought for the grid connection works, which would be carried out under permitted development rights.
41. The demolition of the two southernmost cooling towers would be undertaken by explosive demolition using industry standard techniques and site-specific condition surveys to develop a detailed demolition methodology and explosive design. Appropriate organisations and the local community would be notified of the time and date of the detonation. The context for the proposed demolition of the two southernmost cooling towers is set out within the Planning Statement submitted in support of the planning application. The key considerations are:
 - a. The existing Power Station will close no later than the end of September 2025.
 - b. The demolition and any future redevelopment proposals for the wider power station are distinct and separate projects to the EMERGE Centre.
 - c. However, in order for the EMERGE Centre to be classed as appropriate development within the context of Green Belt the building of the new EMERGE Centre has been linked to the demolition of the two southernmost cooling towers to be completed no later than 31 December 2030 with the link between the demolition and the new build regulated through planning condition.

- d. The EMERGE Centre planning application does not seek consent for the actual demolition of the cooling towers which would be carried out under a separate 'planning process', most likely as permitted development, or if the works were deemed to be classed as EIA development in their own right, by way of a separate planning permission.
 - e. Notwithstanding this fact, the demolition of the two cooling towers does form an essential part of the overall EMERGE development project necessary to satisfy the requirements of planning policy.
 - f. To ensure that the EIA process is complete the second Reg. 25 submission incorporates an assessment of the likely significant effects of the demolition of the two southernmost cooling towers as an effect of the EMERGE Centre development project.
42. Consideration of the environmental effects of the grid connection and cooling towers demolition is incorporated in the planning considerations section of the report
43. The supplementary information provided within the two Regulation 25 submissions does not alter the overall design concept of the development, but they do ensure that the Environmental Statement provides a full assessment of the potential significant environmental effects of the development.

Consultations

44. The planning application has been subject to three rounds of planning consultation. The first consultation was undertaken to coincide with the original submission of the planning application and the subsequent consultations undertaken following the submission of the supplementary Regulation 25 information.
45. This section of the report is formatted to clearly state whether the consultee objects or not to the development and thereafter provide a summary of the matters raised in their consultation response. Where a response has been received from a consultee to either the 1st or 2nd Regulation 25 consultations this is clearly identified and summarised.
46. **Derbyshire County Council: No objection**
47. *Acknowledge that the projections within the planning application identify that the Nottinghamshire and Nottingham area has a capacity gap of 522,705tpa in 2020 and 459,459tpa in 2038 and thus there appears to be sufficient potential input available in the area to match the proposed 470,000tpa capacity of the facility.*
48. *Derbyshire note that the facility may receive waste from a 2-hour drive time from the site, expressing some caution in terms of compliance with the*

proximity principle and net self-sufficiency and that we should not plan for waste to be treated elsewhere. Derbyshire also express some caution that some of the 1.52 million tonnes per annum treatment capacity shortfall in 2035 across the wider region might already be accounted for in planned facilities which are not yet operational.

49. *Derbyshire acknowledge that the longer-term trajectory on arisings is going upwards. In addition, the industry is seeking a long-term solution for the approx. 4 million tonnes currently exported from the UK, which might get problematic (and increasingly expensive) after the December Brexit. The additional capacity is therefore likely to be required and the proposed facility will contribute to reducing the capacity gap.*
50. **Rushcliffe Borough Council:** *No objection.*
51. *Rushcliffe Borough Council do not object to the development, subject to the County Council being satisfied that the proposal accords with the relevant development plan and that all other material considerations can be satisfactorily addressed, including odour, air quality, pest control, health impacts, pollution/contamination, traffic generation, landscaping, availability of waste and impact on heritage assets.*
52. 1st Reg. 25 Consultation: *Rushcliffe Borough Council confirm they have no further comments in respect of the supplementary information and their response remains unchanged.*
53. **Broxtowe Borough Council:** *No objection.*
54. *Broxtowe Borough Council confirm that they have liaised with Environmental Health in providing this response.*
55. **Erewash Borough Council:** *No objection.*
56. *The main issue with the proposal is the look and design of the building from the point of view from Erewash's Conservation Areas (notably Trent Lock Conservation Area and Sawley Conservation Area) and what level of visual impact these will give rise to. It is understood that the height of the EMERGE Centre will be in line with existing buildings adjacent to the proposal and similar to existing neighbouring buildings in terms of colour and size. The proposal is considered to be of an acceptable contemporary design which would not intrude further than existing units on the Ratcliffe on Soar Power Station Site.*
57. **North West Leicestershire District Council:** *No objection.*
58. 1st and 2nd Reg. 25 Consultations: *North West Leicestershire District Council confirm they continue to have no objections to the planning application having considered the supplementary information.*
59. **Ratcliffe on Soar Parish Meeting:** *Raise a series of representations/concerns as set out below:*

- a. *There is a question on whether there is overcapacity in waste incinerators in Nottinghamshire. The Parish recommend that the number and capacity of existing installations be measured and compared with the tonnages of collected "grey bin" waste to see if there is a need for the facility. Concerns are raised that the facility would import waste from surrounding counties.*
- b. *The Parish question how much landfill will be reduced by the burning of waste.*
- c. *The burning of waste should not be allowed to impact on the collection of recyclable material or on any proposed collection of food waste for anaerobic digestion both of which are important for climate control.*
- d. *Waste must not be put to ground on site (as coal is at present) which means there must be consideration of waste hopper size and management to ensure waste does not escape.*
- e. *The lorry routes need to be controlled and monitored to avoid the use of Kegworth Road and West Leake Lane and ensure they use the A453.*
- f. *The Parish Meeting made no representation regarding smell, fumes or unsightly structures as the prevailing wind is westerly and nothing can be seen of the building from any habitation.*
- g. *The transport and disposal of dangerous metals and chemicals produced by combustion should not involve being put to ground. The control of waste outgoing transport routes must be same as for the transport of incoming waste.*

60. **Kingston on Soar Parish Meeting:** *Oppose the planning application.*

61. *The majority decision is to oppose the plans on the grounds of the large increase in HGV activity forecast for the operation of the facility. The Parish acknowledge that the preferred route for HGVs utilises the main A roads but raise concerns that drivers, when faced with long delays at known 'bottle necks', will seek alternatives, and Kingston has witnessed this all too often in the past, causing damage within the village and especially at the New Kingston cross roads where there have been numerous accidents. There is already a regular high HGV usage of the rural roads around Kingston, Gotham and East Leake, as this so often becomes the preferred option in the event of hold ups on the A453, A50, and the A52, and these local roads were not designed for this type of usage. Concerns are also raised about increased traffic from the potential wider redevelopment of the power station following its closure. The Parish question why rail transport cannot be used.*

62. *The Parish state that Rushcliffe already maintains a good record for its recycling of waste and ask why it should have to accept the importing of possible contaminated waste into the area.*

63. **East Leake Parish Council:** *Raise the following observations:*

- a. *There was support for the need for a positive waste recycling strategy and clean energy re-generation in Rushcliffe and Nottinghamshire. East Leake Parish Council would, however, encourage both Councils to be more forward thinking and consider other options to improve arrangements for recycling.*
 - b. *Concern is expressed about potential odour, noise and air pollution from the site impacting on the residents of East Leake and other villages. In addition, councillors were concerned about the potential impact on health, increased traffic on local roads, and how the waste product arising from incineration would be disposed of.*
64. **Gotham Parish Council:** *Object to the scheme due to the adverse effect on local roads the 672 lorry movements per week will have and would suggest greater use of the existing rail infrastructure should be utilised.*
65. **Barton in Fabis Parish Council:** *Object to the planning application.*
 - a. *Barton in Fabis Parish Council raise concerns that the planning application site is not ‘previously developed land’ on the basis that it has never previously been developed with buildings but has been utilised as a laydown area and car park for contractors working on the wider Power Station site and therefore the development is not considered as appropriate development in the Green Belt.*
 - b. *It is understood that the traffic flows associated with the proposal will include approximately 300 lorry loads per day, which could have implications on the local road network. It is unclear whether they will be restricted to the main arterial roads. If not then there is the possibility of them “rat running” along the rural roads and this could create safety issues for other local traffic.*
 - c. *It is not known what the mix of refuse being brought to the site will comprise. Parish councillors were concerned that this could contain toxins and other harmful gas emissions being released into the local atmosphere. This obviously has implications for the air quality in the vicinity of the site.*
 - d. *Allowing this development to go ahead on one corner of the site could have implications for the type of development available on the remainder of the complex once the power station is decommissioned.*
66. **Sutton Bonington Parish Council:** *Object to the planning application raising concerns in respect of:*
 - *Odours*
 - *Air quality, pollution and contamination, which could also have detrimental health impacts*
 - *The generation of traffic on local roads, particularly when there are road closures or problems*
 - *The site is within Green Belt land*

- *How the waste products be disposed of and the implications of this*
- *Control of pests that the site will generate*
- *Climate change is a significant cause of biodiversity loss, in this area and across the world; the UK, Nottinghamshire and SBPC have all declared a climate emergency.*
- *There is an identical site being built at Junction 23 of the M1 so question the need for a second site so close.*

67. **Public Health England:** *No objection.*

68. *Public Health England note that the main areas of potential public health concern is likely to be emissions to air following the combustion of waste in the proposed facility.*

69. *A range of combustion gasses are likely; the applicant has provided a risk assessment of the potential for and magnitude of environmental and public health impacts of these emissions. All nearby sensitive (e.g., residential) receptors were identified and considered within the modelling assessment; the modelling and risk assessment process notes that that emissions from the installation will not cause pollutant levels to rise above third-party criteria (Air Quality Standards and Air Quality Action Levels). All other pollutants - as defined within the Industrial Emissions Directive - relevant for energy from waste facilities have also been assessed; all emissions to air were considered insignificant within the definition in planning and Environmental Permitting guidance.*

70. *A number of scenarios were considered in the assessment, including both the operation of and the removal of, the adjacent existing coal fired power station. The applicant has also commissioned a study into the impact of additional traffic which may occur as a result of the installation. This (traffic impact) is described as 'not significant'.*

71. *It should be noted that the installation will also require an Environmental Permit to be issued for it to operate; this requires an assessment of the potential environmental and public health impacts of the facility. Road traffic emissions from vehicles accessing the plant are not considered within the application.*

72. *Public Health England has reviewed research undertaken to examine the suggested links between emissions from municipal waste incinerators and effects on health. PHE's risk assessment is that modern, well run and regulated municipal waste incinerators are not a significant risk to public health. While it is not possible to rule out adverse health effects from these incinerators completely, any potential effect for people living close by is likely to be very small. This view is based on detailed assessments of the effects of air pollutants on health and on the fact that these incinerators make only a very small contribution to local concentrations of air pollutants.*

73. *Notwithstanding the above, reducing public exposures to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards has potential public health benefits. Public Health England support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), and maximise co-benefits (such as physical exercise) and encourage their consideration during development design, environmental and health impact assessment, and development consent.*
74. *1st Reg. 25 Consultation: Public Health England Trust confirm that the updated information raises no new public health considerations and have no further comments in respect of the supplementary information.*
75. **NCC (Public Health):** *NCC Public Health agree with the comments and recommendations of Public Health England.*
76. **Environment Agency:** *No objection.*
77. *The EA do not object to the planning application subject to planning conditions being imposed in relation to remediating potentially contaminated land at the site, regulating surface water drainage and assessing the potential to connect foul drainage to a public system. The Environment Agency confirm the operation of the EMERGE facility will require a bespoke Environmental Permit. This permit will assess and regulate the level of emissions to air, land and water. The decision on the Environment Permit will be informed by dispersion modelling of emissions and their impacts and risks assessments related to Air quality, Groundwater contamination. The Agency state that as part of the permit process they will seek to reduce the risks to people and the environment which could have implications to the final design and/or layout of the buildings and abatement technology to in compliance with Best Available Techniques (BAT). The assessment will give consideration to effects to proposed future housing development on nearby greenbelt land. The Environment Agency confirm the Permit will consider the following areas of potential harm:*
- Management - including accident management, energy efficiency, efficient use of raw materials and avoidance, recovery and disposal of wastes*
 - Operations - including incoming waste and raw material management, waste charging, furnace types and requirements, validation of combustion conditions, combined incineration, flue gas recirculation, dump stacks and bypasses, cooling systems and boiler design.*
 - Emissions - to surface water, sewer and air, odour, noise and vibration, monitoring and reporting of emissions.*
78. *Residual ash from the incineration plant will be regulated through the Permit to ensure that there are no significant emissions from the site from the handling or treatment of the ash. When ash is sent for disposal or recovery, other waste legislation will apply and the operator will be responsible under a*

'duty of care' to ensure a registered waste carrier to transport the material to an appropriately licensed facility is used.

79. 1st & 2nd Reg. 25 Consultations: *The EA confirm that the supplementary information does not raise any further matters from their perspective and therefore have no further comments in respect of the supplementary information.*
80. **VIA Reclamation:** *No objections (comments provided in response to 2nd Reg. 25 consultation)*
81. *The ground investigation and remediation strategy provided by the applicant follows the usual process of submitting for approval an interpretive report on the site specific Phase 2 ground investigation and, if required, a remediation strategy, followed by a validation report after any agreed remediation or monitoring has been carried out. A contamination watching brief will also need to be submitted for approval in relation to any areas of unexpected contamination that could be encountered during construction.*
82. *In relation to the updated information provided through the Regulation 25 submission, the future submission for the demolition of the cooling towers should incorporate a destructive asbestos survey, phase 1/phase 2 investigation of the site with remediation strategy and validation report, details of demolition plan and CEMP to prevent the demolition of the towers from contaminating the EMERGE site and other surrounding land and air and to ensure that changing / exposing the footprint of the towers does not create any new pathways for contamination from soil, silt or other materials remaining within the tower footprints to impact on human health, controlled waters or any other environmental receptors.*
83. **Canal and River Trust:** *No objection.*
84. *This application falls outside the notified area for its application scale and therefore there is no requirement to consult the Canal and River Trust as a Statutory Consultee.*
85. 1st and 2nd Reg. 25 Consultation: *Canal and River Trust confirm they have no further comments in respect of the supplementary information.*
86. **NCC (Flood Risk):** *No objection.*
87. **Highways England:** *No objection.*
88. 1st and 2nd Reg. 25 Consultations: *Highways England confirm that the updated information raises no new highway issues and have no further comments in respect of the supplementary information.*
89. **NCC (Highways) Rushcliffe:** *No objection.*
90. *The Highways Authority confirm that they have reviewed the Transport Assessment (TA) submitted in support of the planning application and give*

consideration to the highway impacts of importing a maximum 524,550 tonnes of waste per year to the site by road, and associated highway movements.

91. *The average weekday traffic generated will be 309 HGV movements, generating an hourly flow of 45 HGV movements in the AM peak hour (7-8 AM), and 14 HGV movements during the PM peak hour (4-5 PM). Outside of the peak hours the number of movements vary, but generally sit somewhere in the region of 30 movements per hour. There will also be 100 light vehicle movements giving a combined peak of 68 vehicles in AM peak and 14 in the PM peak. The TA transposes these vehicle movements onto existing transport flows on the surrounding network in both its opening year (2025) and 5 years post opening (2030) and shows that the impacts of the development on the county road network are expected to be very limited. All HGV traffic is expected to gravitate towards the A453, with 81% heading towards the M1 and 19% towards Nottingham. With regard to the light traffic the split is more even with 42% heading towards the M1 and 41% towards Nottingham. The remaining 17% is anticipated to head south towards the direction of Kingston / Kegworth. Whilst 17% may seem like a material impact it should be noted the overall number of light movements is very low (22), consequently 17% results in only a handful of additional movements on the wider network during peak hours.*
92. *Given the above, the only areas of the county road network likely to see a discernible change in traffic patterns as a result of the development are the two roundabouts connecting to the A453 slip roads and the short sections of road in between. Both these junctions operate well within capacity in all scenarios and negligible differences when comparing the with and without development queue lengths.*
93. *Based on the above NCC Highways are satisfied the development will not result in any severe impact on the operation of the local highway network or result in an unacceptable risk to Highway Safety.*
94. **Natural England:** *No objection.*
95. *Natural England is satisfied that the proposed development will not damage or destroy ecological features of Lockington Marshes Site of Special Scientific Interest. Natural England's response also incorporates generic/non site specific advice in respect of the protection of the landscape, best and most versatile agricultural soils, protected species, local ecological sites, priority habitats and species, ancient woodland, ancient and veteran trees, environmental improvements, access and recreation, rights of way, access land, coastal access and national trails and protection of biodiversity.*
96. 1st Reg. 25 Consultation: *Natural England confirm the supplementary information is unlikely to have significantly different impacts on the natural environment than the original proposal and therefore have no further comments in respect of the supplementary information.*

97. **NCC (Nature Conservation):** *No Objections but identify a series of ecological matters which should be regulated through planning conditions.*
98. *NCC's Natural Environment Manager initially identified some concerns that the ES had not fully assessed the ecologically effects of the development, specifically in respect of the following matters:*
- a. A number of Local Wildlife Sites (LWS) within 2km of the application site appear to have been omitted from the Ecological Interpretation of Air Quality Assessment report – e.g. Ratcliffe-on-Soar Pond; Copse, Kingston-on-Soar; and Thrumpton Bank. Clarification (and if necessary, further assessment) is required. Natural England should be asked to comment specifically in the context of potential air quality impacts on Lockington Marshes SSSI.*
 - b. Further interpretation of the potential impact of sudden noise during construction is required*
 - c. Potential impacts to badgers and bats from artificial lighting*
99. *Surveys have confirmed that the application site is comprised largely of unvegetated sealed and unsealed ground (stated as applying to 95% of the site), with sparse ruderal vegetation establishing on some areas of aggregate surface. The habitat is classified of being important at the site level only.*
100. *The application site, as part of the wider power station site, is bounded by a metal mesh electrified fence, considered to present a significant barrier to the movement of terrestrial species into the application site. As a result, the habitats within the site were assessed as having little potential to support protected or notable species.*
101. *The site may have the potential to support breeding Little Ringed Plover, a Schedule 1 species. Therefore, if construction is programmed to commence during the bird nesting season, works should be preceded by a bird survey to confirm the absence of this species. In the event that breeding birds are identified, a Method Statement should be produced detailing how works will progress (which may include delaying their onset).*
102. *A Biodiversity Net Gain calculation has been carried out. This appears to have been applied correctly, and demonstrates that if delivered as proposed, the on-site landscaping and habitat creation would exceed the 10% net biodiversity gain requirement.*
103. *A condition should require the submission of a detailed landscaping scheme, to include species mixes, establishment methods and maintenance regimes.*
104. *In terms of potential indirect impacts, the Ecological Interpretation of Air Quality Assessment states that “it can be safely concluded that there will be no ecologically significant effects as a consequence of emissions to air from the Proposed Development”, and more specifically that “no impacts in excess of screening thresholds are predicted at Lockington Marshes SSSI, the only nationally important statutory designated site in a 2 km radius of the site” and*

that “Two woodland LWSs [Gotham Hill Woods and Thrumpton Park] are predicted to experience small magnitude exceedances of screening thresholds for nitrogen deposition. Forbes Hole LNR, and one LWS [Meadow Lane Carr], is predicted to have a small magnitude process contribution to acid deposition, around or just above the 1 % screening threshold. These impacts are not likely to have a measurable ecological effect, and cannot be regarded as significant in EIA terms, or significant in terms of the policy protection accorded to locally designated sites in the NPPF”. Finally, it is noted that “The closure of the coal-fired Power Station is likely to result in a net reduction in nitrogen and acid deposition rates at nature conservation sites in the vicinity of the Proposed Development. This provides further certainty that there would be no adverse ecological effects as a consequence of emissions from the Proposed Development”. No further ecological mitigation measures are identified as being necessary.

105. *The potential for disturbance during construction and operation is considered to be limited by the generally low sensitivity of ecological receptors immediately around the application site.*
106. *Noise impacts during construction and operation have been looked at. The ES identifies a figure of 55 dB LAeq above which caution should be adopted in the context of bird species regarded as highly sensitive to noise disturbance. In this context, operational noise does not appear to be of particular concern, but it is less clear whether sudden noises are likely to be an issue.*
107. 1st Reg. 25 Consultation: *The Reg. 25 response incorporates additional ecological assessments to address the omissions that were identified in the original planning consultation response, in particular:*
 - a. *The local wildlife sites have now all been identified, and it is stated in the Regulation 25 Submission (para 3.2.1) that the inclusion of these ‘does not materially alter the conclusions of the ecological interpretation of the Air Quality Assessment report’ which states in section 8.2 that ‘emissions from the Proposed Development would not be at levels which could lead to significant adverse effects on the ecological features at these [all LWS] sites under all of the scenarios considered’.*
 - b. *The additional interpretation provided in terms of sudden noise impacts is appropriate and adverse impacts are not anticipated.*
 - c. *Additional information has been provided in relation to artificial lighting, highlighting that the existing power station site is already lit. Mitigation measures outlined in para 3.2.16 of the Regulation 25 Submission set out how artificial lighting should be controlled. The submission of a detailed lighting scheme, based on these measures, should be made a condition of any permission granted and a pre-commencement survey for badger setts should be carried out within 50m of the northern and eastern application site boundaries to ensure that no*

new setts have been created, and if necessary identify mitigation against indirect impacts caused by construction.

108. *The Regulation 25 Submission, in section 3.3, also provides a response to a number of additional matters raised by Nottinghamshire Wildlife Trust, these matters appear to have been satisfactorily addressed.*
109. **Nottinghamshire Wildlife Trust:** *Object to the planning application.*
110. *The applicant does not appear to have undertaken a full range of ecological surveys, with the Wildlife Trust criticising the lack of satisfactory breeding bird and bat surveys and requesting a more detailed evaluation/interpretation of species affected by the development within and nearby the site. In particular, the effect that increased levels of noise and light could have on breeding birds and bats cannot be quantified. The Wildlife Trust also raise concerns that changes in air quality and their effect on nearby local wildlife sites and Attenborough Gravel Pits SSSI have not been adequately assessed. Further information is requested in respect of measures to avoid pollution of water and landscaping arrangements prior to the determination of the planning application. Because the applicant has not fully assessed the ecological effects of the development it is not possible to conclude there would be no cumulative impacts with the HS2 development.*
111. *2nd Reg. 25 Consultation:* *Nottinghamshire Wildlife Trust are concerned that the assessment of environmental effects associated with the demolition of the cooling towers makes an assumption that there would be no constraints to demolition, but this assumption is made in the absence of investigations/surveys having been made, without this information it is not possible for the Council to rigorously determine this application.*
112. *The Wildlife Trust continue to have concerns in relation to the adequacy of ecological surveys in connection with the main EMERGE development and the interpretation of the survey results. They do not agree that the cessation of emissions from the power station provides “headroom” for introducing a new source of pollution to the site, noting that the power station will close as a matter of legal requirement thereby removing the current source of pollution, and so the correct baseline for assessing any new development should be against a background of no pollution from the power station. The Wildlife Trust request full specifications of new habitats and management should be provided as part of the planning submission rather than through planning condition to ensure assurances that habitat losses will be appropriately compensated are demonstrated prior to the determination of the planning application.*
113. **NCC (Planning Policy):** *Provide planning policy advice in connection with the development as set out below:*
114. *Nottinghamshire and Nottingham Waste Core Strategy (WCS) Policy WCS3: Future Waste Management Provision is supportive of new energy recovery facilities where it can be shown that this would divert waste that would*

otherwise need to be disposed of and the heat and/or power generated can be used locally or fed into the national grid.

- 115. In relation to need, Table 5 of the WCS identifies that within the plan period additional recovery capacity of 194,000 tonnes for commercial and industrial waste is required. However, this additional capacity need was calculated assuming a recycling rate of 70% and therefore if this was not achieved, more recovery or disposal capacity may be required. To ensure flexibility, paragraph 7.16 details that if the Annual Monitoring Report (AMR) showed the actual recycling rates was lower than the targeted 70% then this would be a material consideration in determining planning applications for other types of waste management facilities.*
- 116. The 2018/2019 AMR outlines how recycling rates locally are reaching a plateau with municipal recycling currently at 38.8% and so below the WCS target. The AMR also outlines that whilst the permitted capacity for recovery has increased since the WCS publication, to 755,000 tonnes, the operational capacity remains lower at 215,000 tonnes. Considering the operational capacity and the lower recycling rate, it therefore would be appropriate to consider these factors as a material consideration when determining this application and understanding whether there is a local need for a recovery facility which proposes to accept municipal and commercial and industrial waste as well as combustible construction and demolition waste.*
- 117. The applicant also outlines that there is a regional and national need for the facility, with a forecasted 1.52 million tonnes residual waste capacity gap by 2035 within a 2-hour drive catchment of the proposed facility. As there is potential for importation of waste, as per policy WCS12: Managing non-local waste, the applicant will need to demonstrate that there are no facilities or potential sites in a more sustainable location in relation to the anticipated source of the identified waste stream, that it will contribute the movement of waste up the waste hierarchy, and that there are wider sustainability benefits that support the proposal.*
- 118. The Planning Statement accompanying the application outlines that waste will be transported to the proposed facility by road, with good highway access and routes to strategic networks already established. The site though does have the potential to import waste via the existing railway line which the applicant will keep under review to understand whether in the future this could be used if viable and feasible. Policy WCS11: Sustainable Transport seeks for proposals to maximise the use of more sustainable transport methods and so this potential should be fully explored.*
- 119. As outlined in the supporting text of Policy WCS11, large and medium scale facilities should be sited as close to the source of waste as far as practically possible to minimise transport and its impacts. In accordance with Table 8 the facility would be classified as a large-scale facility and as per Policy WCS4: Broad Locations for waste treatment facilities, such large-scale proposals will be supported in, or close to the built-up areas of Nottingham and Mansfield/Ashfield, in which this development does fall. The proposed*

site does also lie within the Nottinghamshire-Derbyshire Green Belt, with Rushcliffe Local Plan Part Two (2019) policies map showing the Green Belt washing over the entire power station site. However, the proposal sits within the wider power station site which is due to close in 2025 and be decommissioned in the following years. The land therefore can be seen as previously developed land. The benefits of redeveloping this strategic site therefore will need to be balanced with the impact on the Green Belt of the current power station and the proposed development to understand if very special circumstances can be demonstrated to allow development to proceed.

120. *Finally, the Environmental Statement considers the potential impacts relating to environmental and amenity matters. In order for the development to be in accordance with Policy WCS 13 and policies within Chapter 3 of the Waste Local Plan it needs to be demonstrated that the development can be undertaken without potential significant environment impacts..*
121. 2nd Reg. 25 Consultation: . *Do not have any further comments to make.*
122. **Network Rail:** *Raise no observations.*
123. 2nd Reg. 25 Consultation: *Raise no observations.*
124. **National Planning Casework Unit:** *Raise no comments on the environmental statement.*
125. *The casework unit have subsequent contacted the Council, confirming that they have received a request to intervene in the planning decision. The Planning Casework Unit request that if the Planning Committee is minded to approve the planning application, then the Council do not issue the decision notice before giving the Secretary of State an opportunity to consider the request to intervene.*
126. **Via (Rights of Way Manager):** *No objections. There are no public rights of way within the development site.*
127. *Thrumpton Footpath 9 crosses the access road, leading to Footpath 8 & 1 which then links to the cyclepath. The signed cycle route uses Barton Lane (as quiet road) and continues on the cycle path at the point where FP 8 starts and runs alongside the A453 off-slip and south side of the Power station site to the access roundabout. Both routes cross the access road at a similar point. A significant number of vehicles/HGV will use the access road and this has implications for the public being able to safely cross the road from both the footpath and the cycle path. The applicant should consider how to protect these crossing points by for example signage warning the vehicles of the likelihood of pedestrian and cyclists as they come up to this point (cycle route ahead, pedestrian in road) or road markings and provide a plan for approval prior to the access coming in to use*

128. **Via (Landscape):** *Following the receipt of supplementary information provided in the Reg. 25 response, VIA Landscape confirm they are in agreement with the conclusions of the assessment that there are no significant impacts in terms of the EIA regulations (levels of effect above moderate adverse) and the levels of effect have been clearly identified by the applicant in their Landscape and Visual Impact.*
129. Landscape Assessment: *The Landscape and Visual Impact Assessment (LVIA) has been carried out to the accepted best practice referring to national, regional and local landscape character assessments. The use of Regional Landscaper Character Types (RLCT) for assessing the effects of the development is considered appropriate because the study area straddles the boundary between Nottinghamshire, Leicestershire and Derbyshire and there is not a consistent Landscape Character Assessment approach between counties, whereas there is a consistent regional coverage of the whole area. Because RLCT 5b is influenced by other development at Junction 24 the proposed development will not lead to changes in its character. For RCLT 8a and 3a it is agreed that the level of effect is minor – moderate adverse. Further comment was requested from the applicant on RCLT 4a – unwooded vales to confirm whether the effect is negligible or minor adverse having regard to the fact that the new stacks at 110m will be still be visible above the ridgeline. A detailed landscape proposal drawing with full planting schedules, showing species, specification and density of plant material and maintenance should be required as part of a submission under planning condition.*
130. Visual assessment: *The levels of visual effect from the built development identified by the applicant are considered accurate and take into account changes in the nature of the view as structures such as the cooling towers are demolished on the adjacent site post 2025, but an additional viewpoint to assess visual impacts from Thrumpton Conservation Area to the north of the site was requested. A further assessment of the visual impact of the cranes used during the construction period was also requested.*
131. Green Belt: *The Landscape Team agree that the development will not lead to significant adverse effects on the landscape character or to visual effects on the Green Belt.*
132. *Cumulative Landscape and Visual Impact assessment with the construction of the HS2 works are not anticipated to occur providing that timescales outlined in the draft construction plan for HS2 are adhered to.*
133. 1st Reg 25 Consultation: *VIA (Landscape) confirm that the supplementary Reg. 25 information demonstrates that the applicant's conclusion that the level of effect on RCLT 4a - unwooded vales is negligible, the submission of a detailed landscape scheme can be regulated through planning condition, an additional viewpoint assessment has been made from Thrumpton Conservation Area which demonstrates that the visual effect of the development from this location would be minor and not significant and further assessments have been made of the level of effect from the construction*

stage which shows there would be no levels of effect greater than moderate adverse..

134. *2nd Reg. 25 Consultation: The landscape team are in agreement with the findings of the Reg. 25 submission and consider the removal of the two existing southernmost cooling towers from views would have a positive beneficial effect on local landscape character and views from local visual receptors and the grid connection cabling would be underground with no prominent landscape or visual effects.*
135. **Via (Noise Engineer):** *Raise no objections*
136. *During the construction phase, a list of best practices is presented to control the noise during the development works. During the operational phase, initial noise control measures for the plant and building have formed the basis of the noise predictions and subsequent assessment of impact and significance. The worst-case scenarios are identified and well described during the construction and operational phases.*
137. *The day-time construction works (between 07:00 and 19:00, Monday to Saturday) with associated noise levels have been assessed and their potential impacts calculated using the BS5228:2009 method to estimate the total ambient noise at noise sensitive receptors. The results show a negligible impact from construction works, with predicted noise levels between 5 and 16 dB(A) below the threshold value (65 dB) in BS5228).*
138. *The assessments made by using BS4142: 2014+A1:2019 for the operational phase indicate that the impact would be low as the rating levels are significantly less than the background LA90 levels and therefore it is concluded the proposed development will have a negligible noise impact during the day and night-time.*
139. *The impacts of the increase from road traffic shows also a negligible magnitude and neutral effect level of significance (a maximum increase of 0.1 dB(A) to the LA10,14h levels).*
140. *Advice should be taken from NCC Ecology officer regarding the effect that increased noise would have on ecological features in the surrounding area.*
141. *1st Reg. 25 Consultation: No further noise comments to make, noting that further noise impact assessments have been undertaken to consider effects on local ecological receptors which will be reviewed by ecologists to determine their acceptability of the applicant's response to the queries*
142. **High Speed Two (HS2) Limited:** *No objection.*
143. *The application site does not overlap with land currently subject to HS2 Safeguarding Directions and the EMERGE Centre proposal would not prevent the HS2 development in terms of the construction, commissioning and operation of the HS2 railway.*

144. 1st Reg. 25 Consultation: *HS2 Limited confirm they have no further comments in respect of the supplementary information.*
145. 2nd Reg. 25 Consultation: *HS2 confirm that their original response remains accurate, however they would like to draw the applicant's attention to the potential implications of the proposed demolition. The ES Update, section 4.10.1, refers to demolition of the cooling towers and the implications for the East Midlands Railway route and station located immediately west of the cooling towers, and that both would require temporary closure. While the proposed HS2 route is further west from the cooling towers than the existing railway route, clearly should demolition take place concurrent with HS2 construction or operation there would be likely similar implications for the HS2 scheme. In light of the above, HS2 Ltd would reiterate to the applicant and Nottingham County Council that continued dialogue throughout the design and development process will be vital to ensure that both schemes can co-exist without disruption.*
146. **Historic England:** *No objection.*
147. 2nd Reg. 25 Consultation: *Do not wish to raise any comments on the basis of the new information provided*
148. Reg. 25 Consultation: *Historic England confirm they do not wish to offer any comments regarding the supplementary information and suggest the views of specialist conservation and archaeological advisers is taken.*
149. **NCC (Built Heritage):** *Do not object, but there are some heritage impacts which result from the development.*
150. *NCC's Historic Buildings Senior Practitioner initially identified some concerns that the ES had not fully assessed the effect the development would have on built heritage, identifying the following concerns:*
- a. There is no plan to identify the location where photographic surveys were undertaken making their interpretation difficult.*
 - b. Effects on the heritage assets of Thrumpton, Long Eaton, Sawley and Trent Lock Conservation Areas and the primary listed buildings such as Ratcliffe on Soar parish church, Thrumpton Hall and the setting of the registered parkland of Kingston Hall have not been appropriately assessed.*
 - c. There is no assessment of the impacts of the proposals on the heritage significance of the present power station, in particular the effect that the demolition of two cooling towers would have. The probable removal of the power station which is a dominant visual 20th century component in the area could be undermined by the development of the EMERGE Facility which would continue to present a large-scale visual intrusion visible from surrounding heritage assets and requires further assessment.*

151. 1st Reg. 25 Response: *The Regulation 25 response incorporates additional heritage assessments and ensures the Environment Statement fully considers the effect the development would have on the heritage asset of the area in accordance with the requirements of NPPF paragraph 189.*
152. *The assessment identifies that the effects of the construction and operation of the EMERGE facility upon the setting of heritage assets (both designated and non-designated) would range from negligible adverse to minor adverse impacts and constitute less than substantial harm to the significance of the heritage assets.*
153. *The greatest impacts on the setting of surrounding heritage through the visual intrusion of the tallest element of the facility (the chimney) on surrounding views. These include views out of Thrumpton Conservation Area, from Thrumpton Hall (both designated heritage assets) and from within the parkland associated with Thrumpton Hall (a non-designated heritage asset). There is also an impact on views from the historic village of Barton-in-Fabis (which is not a designated conservation area) and there will be glimpsed views of the new facility from the parish church at Ratcliffe on Soar. To the north of the river Trent, including from within the conservation area at Trent Lock, there are very clear views of the power station site (these were identified as negative at the time of designating the conservation area by Erewash BC). The additional impact of the EMERGE facility will add to this negative impact on views across the river from the north. Although these are harmful impacts on the setting of designated and non-designated heritage assets, individually each of these constitutes less than substantial harm.*
154. *One aspect of the long-term development and management of the power station site, associated with the EMERGE facility proposals, is the decommissioning and removal of elements of the coal-fired power station. The coal-fired power station is a non-designated heritage asset that has been considered for 'listing' by Historic England during their review of the industry. The impact of removing cooling towers, in particular, will cause substantial harm to the heritage significance of the power station heritage asset. As such, any reference in the planning proposals for the EMERGE facility to the removal of cooling towers as a positive mitigation for the visual impacts of the new facility on other heritage assets must be discounted.*
155. *Overall, the proposals are considered to have some harmful impacts to the heritage asset of the area, but the magnitude of this impact is considered to be less than substantial. The Planning (Listed Buildings and Conservation Areas) Act 1990 requires the planning authority to have special regard to any heritage impacts but paragraph 196 of the NPPF provides scope to balance impacts to the historic environment which are less than substantial against public benefits of the proposal.*
156. **NCC (Archaeology):** *No objections*
157. *The archaeology of the area is complex. Close to the Power Station is the site of a Roman temple, scheduled as an ancient monument, and overlooking*

the Redhill Marina at the confluence of the Rivers Trent and Soar. Archaeological work in anticipation of the potential development and extension of the Marina, as well as on the East Midlands Parkway, demonstrated extensive Roman urban occupation extending at least as far as the perimeter of the Power Station. There were sketchy and difficult to locate reports of Roman remains – including human remains which were discovered during initial works on the construction of the Power Station and this Roman occupation probably extended to at least the North west portion of the Power station site.

158. *However, since the power stations construction in 1960's there has been significant earthmoving and repeated phases of different development and it is to be expected that this will have removed much of the archaeology, but as parts of the site have also been built up with imported material, it is also conceivable that islands of buried archaeology remain.*
159. *As an extension of the scheduled site to the West such survivals could be of significance, not least because their presence would demonstrate just how large the area of Roman urban occupation was. NCC's Archaeology Senior Practitioner considers the applicants' archaeological consultants have done an excellent job of utilising existing geotechnical information to develop a deposit model for the development site which confirms that there is indeed a possibility that islands of archaeological deposits may survive. They note that the deep deposits of "made ground" identified in the existing borehole information might include archaeological deposits which the personnel logging the information reasonably might not have identified. They have proposed that there should be archaeological monitoring of a programme of geotechnical investigation, and that this work should be required as a condition of any planning consent. They have further recommended that if archaeological deposits are identified in this work, this should be subject to appropriate levels of archaeological mitigation so as to achieve a good archaeological record, and therefore better understanding of the overall Roman landscape.*
160. *NCC's Archaeology Senior Practitioner confirms she is in complete agreement with the approach proposed, and request this is regulated through the imposition of two linked pre-commencement conditions; one requiring a programme of geotechnical work and the second requiring the agreement and implementation of a programme of mitigation work, which should include provision for palaeoenvironmental work and scientific dating.*
161. **Nottingham East Midlands Airport:** *No objections following the receipt of supplementary information incorporated in the two Reg. 25 responses.*
162. *Nottingham East Midlands Airport initial consultation response requested further information to determine whether the new development will cause any detrimental impact to aircraft safety in respect of:*
 - a. *An analysis of the effect of the hot thermal plume on the aviation meteorology for the flight paths of East Midlands Airport. This analysis*

should include a comparison of the emission from the existing cooling towers and the proposed stacks and information about the anticipated effects on thermals and wind shear for both large and small aircraft.

- b. An analysis of the visual impact of the plume in different atmospheric conditions relative to the flight paths of East Midlands Airport with particular emphasis on dispersion in reduced visibility weather conditions.*

163. 1st Reg. 25 Response: *Nottingham East Midlands Airport confirm that the supplementary Reg. 25 information has addressed their initial concerns regarding the development, and they confirm they have no aerodrome safeguarding objections to the development. The following matters are identified in Nottingham East Midlands Airport response:*

- a. The height of the development and in particularly the chimneys at 189.5m AMSL is acceptable in the context of flight safety.*
- b. Obstruction lighting should be installed to the chimney in accordance with EASA design guidance.*
- c. Any gas purging on site will need to be approved by the EMA safeguarding department due to the location adjacent to Runway 27 approach.*
- d. Close liaison with the airport will be needed in the project management of the demolition phase due to the location of the site adjacent to the approach and departure flight routes at EMA. It is strongly advised that the demolitions will need to be carried out during planned airport maintenance closures.*
- e. Any detailed landscaping plans (especially involving water bodies) will need to be submitted to the planning authority for approval in consultation with the aerodrome safeguarding authority for EMA.*
- f. Consideration needs to be given for the design and height of crane and tall equipment required for the construction works.*

164. 2nd Reg. 25 Response: *East Midlands Airport have reviewed the additional submission in relation to the demolition of the two cooling towers and also undertaken a more detailed appraisal of aircraft safety in relation to the wider Emerge Development, East Midlands Airport maintain their no objection position in relation to the planning application, but recommend a series of planning conditions as set out below to maintain aircraft safety:*

- a. The production of a wildlife management plan to regulate the storage waste internally of the buildings to ensure they do not encourage the accumulation of scavenger birds and to manage/avoid nesting habitats within the roof structures of the building.*
- b. The incorporation of reedbeds to the edges of the SUDs drainage pond to discourage access by large waterfowl.*

- c. *Consideration of aircraft safety issues in controlling the level of dust emissions associated with the demolition and construction works.*
 - d. *Controls relating to external lighting to ensure it is not disruptive to aircraft safety.*
 - e. *Further details in relation to the aircraft warning lights installed on the flue stacks.*
 - f. *The avoidance of reflective materials in the exterior faces of the building.*
 - g. *The avoidance of photovoltaic equipment in the development site.*
 - h. *Controls relating to the release of gas emissions from the site.*
 - i. *A limit to the maximum height of the flue stacks*
 - j. *Details of the height of construction cranes*
165. **Civil Aviation Authority:** *The CAA defer to the technical expertise of the safeguarding department at East Midlands Airport and therefore raise no specific observations regarding the development.*
166. **Nottingham City Council, Thrumpton Parish Meeting, West Leake Parish Council, Sawley Parish Council, Nottinghamshire Gardens Trust, National Grid Company PLC, Western Power Distribution, Severn Trent Water and Cadent Gas** have not provided a consultation response. Any response received shall be orally reported.

Publicity

167. The planning application has been publicised through the display of site notices, the publication of a press notice in the Nottingham Post and 200 neighbour notification letters sent to the occupiers of nearby property including all properties in Thrumpton village. The publicity has been undertaken in accordance with the County Council's adopted Statement of Community Involvement and acknowledges the current constraints that the Covid 19 epidemic imposes including the advice incorporated in the Councils Statement of Community Involvement Covid 19 Addendum. As a result, wider publicity of the planning application has been undertaken than would otherwise have occurred. Officers have also contacted each Parish Council in the area to ensure that they are engaged in the process including an offer to provide clarification of the development proposals and flexibility for the Parish Council's to provide their consultation response. The planning application has been re-publicised following the receipt of each of the two Regulation 25 supplementary information submissions by the publication of a further press notice in the Nottingham Post and the posting of site notices to ensure compliance with the publicity obligations incorporated in the Town and Country Planning (Environmental Impact Assessment) Regulations 2017.

168. The publicity undertaken by the County Council resulted in 44 letters of representation being received. Of these letters, 28 object to the planning application and 16 support the planning application.

Objections to the planning application

169. The 26 letters of objection raise the following matters.

- a. Concerns relating to the amount of waste treated by the facility and where it will be sourced from.
 - Questions are asked whether there is sufficient waste to supply the incinerator.
 - It is unclear where the waste will come from, with the area from which waste is collected being undefined.
 - Waste will come from far afield. Do we really want Nottinghamshire and Rushcliffe to become the dumping ground for the entire East Midlands?
- b. Need for a new incinerator.
 - There is no need for an additional incinerator.
 - The UK has an oversupply of incinerators.
 - The existing Eastcroft Incinerator already deals with Nottingham's and Rushcliffe's waste. There are already about 20 existing Incinerators within a two-hour radius that have spare capacity.
 - There is not a lack of landfill resource.
 - The development of a new large incinerator will commit councils to incineration for many years to come.
 - The applicant's evidence base to justify the need for the incinerator contains false assumptions relating to an increase in waste and the need for more treatment capacity.
 - Government Policy will result in reductions in waste production over the next decades and there is likely to be an oversupply of incinerators in the UK.
- c. Impacts relating to levels of waste recycling and the sustainability of the development.
 - It would be more sustainable to stop creating waste or reduce the amount of waste produced.
 - Recycling of waste should be encouraged, the development of an incinerator to burn recyclable waste is a complete step backwards.
 - Waste should be reduced, reused, re-purposed and repaired.
 - The waste feedstock is 50% recyclable.

- The facility should not be burning plastic waste.
- WCS Policy WCS3 seeks to achieve 70% recycling of waste, and seeks to reduce the quantity of waste going to incineration or landfill to 30%. If this quantity of waste was recycled there would not be sufficient waste within Nottinghamshire to feed the incinerator and the facility would have to search far and wide to import waste from outside Nottinghamshire, which would be contrary to WCS Policy WCS12.
- Local Authorities which have access to waste incinerators have lower rates of recycling.
- The development is contrary to the Government's policy to encourage a circular economy which the applicant dismisses as being over ambitious.
- The applicant references many documents that were published before the Climate Change Act was amended in 2019 and therefore lack sufficient ambition.
- The Government's Waste Strategy identifies that there is potential scope to introduce a tax on incineration if its waste reduction and recycling targets are not delivered.
- The Council's Waste Core Strategy aims at recycling or composting 70%: commendable. Eventually we could reach 90% or 95% or more.

d. Climate Change concerns

- The operation of the facility will contribute to global warming. The scheme will release high levels of carbon emissions.
- Incineration produces one tonne of CO₂ for every tonne of waste burned which exacerbates the climate crisis. As a method of generating electricity it is 23 times worse than the green alternatives.
- The facility cannot be claimed as low carbon energy development. It is higher than alternatives in natural gas and ten times more than wind and solar.
- The development will not comply with local and national targets to mitigate climate change and will not achieve net zero emissions.
- The applicant has compared carbon emissions from the EMERGE electricity generation with the level of emissions from electricity generation from gas, which ignores the fact that much electricity is generated from less carbon intensive sources and exaggerates any level of carbon benefit that the EMERGE may offer.
- The applicant's case for the carbon emission superiority of the proposed development rests largely on the unburned methane emissions from landfill originating from food paper and card disposal in landfill, but these materials can be diverted to anaerobic digestion which would provide a more environmentally acceptable solution.

- Waste incinerators generate at least twice as much CO₂ per unit of energy generated than the current grid average with additional NO_x and harmful particulates. They are most certainly not a green development. The proposal is not in the spirit of that progress and contradicts the 2015 Paris climate change agreement.
- The development is likely to be severely restricted by law or become economically unviable within the near future as climate change restrictions are increasingly tightened.

e. Use of alternative waste treatment techniques

- The applicant calculates that the proposed development would deliver a carbon benefit over landfill estimated at 106,000 tonnes of CO₂e per year. Their analysis implies that the only choice available to society is that between energy from waste and landfill. Other waste treatments (especially those dealing with methane emissions) and other ways of valuing short cycle carbon are available.
- Anaerobic digestion for food waste provides lower CO₂ emissions than incineration and this is not proposed as a use for this site.
- Treatment of biodegradable waste (and a proportion of mixed waste) by anaerobic digestion, possibly linked to heat generation is becoming the method of choice for this waste stream. The Environment Bill on its way through Parliament will introduce compulsory separate food waste collection. Food waste should therefore not be considered as an available resource for incineration.
- Anaerobic digestion of biogenic and mixed residual waste with temporary landfill of unrecyclable plastics should be the method of choice for residual waste management.
- Anaerobic digestion, hydrogen fuel, battery storage and other truly ambitious technologies already in use and in development in our region could and should be encouraged as alternative energy supplies.

f. Traffic

- Concerns are raised that the delivery traffic would increase congestion on the surrounding highway network.
- The delivery traffic will generate noise and pollution.
- Deliveries should be carried out by rail, particularly deliveries from further afield.
- There should be restrictions imposed on the number of vehicles and their routing when the plant becomes operational.
- Large goods vehicles should be prohibited from accessing the Kegworth Road from the A453 interchange at Ratcliffe-on-Soar southwards which is of insufficient size to safely accommodate them in any numbers. Similarly, the minor road from the proposed site access at the A453

interchange at Winking Hill southwards to New Kingston crossroads is already over used by large vehicles and will not stand further such traffic.

- Residents in Kegworth have fears that HGVs and vehicular traffic in general, will use the northern part of Kegworth, Station Road towards Ratcliffe-on-Trent as a convenient cut through at busy, congested times. There is a ban of HGVs through Kegworth, but unfortunately this doesn't stop this happening.

g. Pollution

- The development would increase atmospheric pollution. Incineration allows particulate matter to be released into the environment, which is very troubling for downwind residents.
 - The prevailing winds will blow potentially toxic fumes from the incinerator over the Nottingham and Rushcliffe region.
 - Burning of plastics is basically fossil fuel burning with a few toxins added and is contrary to WCS Policy WCS14.
 - It is not clear what processes are in place for the County Council to monitor breaches of emissions and air quality and what resources they have to enforce breaches.
 - Insufficient information has been provided about health impacts.
- h. There are also many health risks associated with the emissions. There is nothing to reassure against a drop in air quality for surrounding residents or details of any emissions monitoring that will be carried out to protect residents in the surrounding areas. Studies have shown that a wide area can be affected, and that accurate dispersion modelling is required. There is no dispersion modelling included with the application.
- i. The site is in the Green Belt, and the proposed incinerator is therefore not in accordance with WCS Policy WCS4 which states that large waste management in Green Belt areas should only be permitted in very special circumstances.
- j. The development will have a negative visual impact and is of a poor design.
- k. The facility will generate a comparatively small quantity of electricity.
- l. The applicant states that the facility will be capable of providing heat to the surrounding area. Using waste heat directly can be >90% energy efficient, converting it to electricity, for onward use as heat and power delivers only around 30% efficiency. If an incinerator is built to last 20-25 years but the houses built to use the heat are expected to last longer, how will the houses be heated once the incinerator closes? Will the incinerator need to be kept on to keep the houses heated, or will residents be expected to convert to another source of heat at considerable cost? Would those receiving the heat be 'locked in' to paying for that heat, will they pay a fair market price

compared to other options? Could they end up in fuel poverty? And how would any of this be compatible with net zero targets?

- m. The operation of the facility will generate odour.
- n. The development of the facility has potential to restrict access to local footpath networks in the surrounding area.
- o. The development will adversely affect Attenborough Nature Reserve.
- p. The development is likely to damage tourism and only strengthens the image of the Midlands as a region of factories and planning blight. This development would be squandering the chance to greet visitors to Nottingham with something more pleasant than a stack of chimneys.

Support for the planning application

170. The 16 letters of the support raise the following matters.

- a. The development will provide local, high value technical jobs for local residents after the closure of the coal fired power station.
- b. It is good to see that plans are being made for this site prior to its closure to minimise the loss of the industrial base locally and ensure the Ratcliffe site continues to support the local economy.
- c. Building the EMERGE centre will support the power station's future redevelopment potentially based around sustainable energy, job creating industry and research centres, ensuring that the Radcliffe site continues to produce electricity.
- d. The use of non-recyclable waste to generate energy in an environmentally sensitive way is supported.
- e. The proposed development would have a minimal impact on the local environment and would be significantly better for the environment than allowing the significant quantities of waste being disposed into landfill.
- f. Whilst incineration does not provide carbon-free electricity, it does provide a means of dealing with waste that would otherwise end up in landfill. Waste that burns gives off CO₂, whereas waste left to decompose gives off methane - which is much worse than CO₂ from a climate change perspective due to its heat retention properties in the atmosphere
- g. The plant will play an important part in the country's journey to achieve net zero for carbon emissions by 2050
- h. The footprint of the plant is relatively small compared to the coal site and the chimney is lower in height and significantly less obvious than the current cooling towers.

- i. Uniper should engage with and use local suppliers and contractors and provide jobs for residents within the council area during the delivery of the project.
171. **United Kingdom without Incineration Network (UKWIN):** *Object to the development, focussing on three main areas of concern:*
- *The adverse climate change impact of the proposed EMERGE incinerator;*
 - *The need, or otherwise, for the proposed EMERGE incinerator capacity and associated adverse impacts; and*
 - *The adverse impacts of the proposed EMERGE incinerator on visual amenity and the actual and perceived openness of the Green Belt.*
172. *Concerns relating to Climate Change Effects:* *The EMERGE facility would result in a net adverse climate change impact as it would result in the release of more greenhouse gasses when compared with sending the same waste to landfill. More generally, the applicant's claims of climate change benefits do not stand up to scrutiny.*
173. *The proposal is reliant on fossil fuels such as plastic for feedstock.*
174. *The applicant's ES identifies that the EMERGE facility potentially could release more carbon emissions than sending the same quantity of waste to landfill, identifying a worse-case scenario where the EMERGE facility would release 27,718 tonnes more CO₂ than disposal in a landfill. This scenario could potentially occur if the biogenic portion of the waste entering a landfill did not decompose and therefore did not release its CO₂ content to the atmosphere, effectively meaning the landfill would store this carbon.*
175. *The applicant's assessment incorrectly assumes untreated waste will continue to be sent to landfill which is implausible as the treatment of this material is far more likely to be in line with the Government's move to Net Zero by 2050, meaning waste would be bio-stabilised prior to landfill. Bio-stabilisation renders material virtually inert, meaning hardly any methane would be emitted, and the overwhelming majority of biogenic carbon would be sequestered (stored) in the landfill.*
176. *Both the Government and the Climate Change Committee are calling for reductions in both the plastic and biogenic content of waste. UKWIN question whether there will be sufficient waste to feed the EMERGE incinerator once these materials are removed, particularly within a 2-hour radius of the site. The facility is not compatible with higher rates of recycling (70% target by 2030) and increased composting/anaerobic digestion of waste. Overcapacity of incineration jeopardises the achievement of the Government's decarbonisation ambitions, and therefore represents an increased risk to the achievement of Net Zero by 2050.*

177. *The EMERGE facility will compete with other incinerators including Eastcroft and Sheffield, both of which incorporate district heating schemes which recover higher levels of energy from waste.*
178. *The applicant's references to carbon capture technology are not accompanied by a commitment, e.g. a suggested planning condition or unilateral undertaking. They appear to be reliant upon the hope of external Government funding that has not been secured and is not on offer. Retrofitting carbon capture is expensive, has not been budgeted for and reduces the efficiency of the plant. The applicant's decarbonisation claims should therefore be afforded little or no weight in the planning balance. The applicant should transform their application into one for temporary planning permission until 2040, with the option of applying for an extension to this consent were they able to find a workable and viable means by which to be consistent with the Government's commitments to meet the legally binding Net Zero 2050 target.*
179. *The applicant concedes that their facility would be a high-carbon development when compared with conventional electricity generated to the grid offering carbon intensity figures for the EMERGE incinerator of around 560 gCO₂/kWh compared to 349 gCO₂/kWh for conventional energy generated to the grid. Even if all the food and plastic were to be removed from waste feedstock, the carbon intensity of the energy generated by the EMERGE would still be higher at 379gCO₂/kWh.*
180. *Need and associated adverse impacts: The EMERGE planning application overestimates levels of future residual waste arisings and underestimates residual waste treatment capacity. It fails to adequately explore the locational, waste hierarchy and feedstock implications of the likely future waste context.*
181. *The applicant has not demonstrated that the proposed EMERGE incinerator would divert waste that would otherwise need to be disposed of. Part of the applicant's argument that there is a need for the facility is based on Nottinghamshire not meeting its target to recycle 70% of waste as stated in the WCS and in Government documents including the most recent consultation on the draft replacement Waste Management Plan for England (WMPE), released for consultation on 20th August 2020. The applicant has therefore failed to demonstrate compliance with WCS Policy WCS3. UKWIN identify that an over-supply of incineration capacity has potential to harm recycling and the Government has warned that they will consider introducing an incineration tax to divert waste from incineration to recycling.*
182. *The applicant has not shown that sufficient feedstock would be available to them from within Nottingham and Nottinghamshire to prevent reliance on importing significant quantities of waste from outside of the Plan area. The facility does not comply with WCS12 insofar that it does not move waste management up the waste hierarchy, the applicant does not argue there are no better suitable alternatives and there are no wider social, economic or environmental sustainability benefits that clearly support the proposal.*

183. *The EMERGE facility is likely to compete with operational incinerators for waste which does not result in a movement of waste up the waste hierarchy. The applicant's evidence base regarding need is reliant on a national market analysis report prepared by a private consultancy (Tolvik), but this is not freely available to be inspected and scrutinised. The applicants have also commissioned Tolvik to assess and evaluate the availability of waste using a circa 2-hour drive time catchment area from the Power Station site, referencing its findings in the planning submission but not making the report available for scrutiny. UKWIN state that this data is unreliable and should be discounted. Concern is expressed that this data fails to identify a number of facilities with a combined capacity of 2.67 million tonnes within 2 hours drive of the EMERGE facility, thus under estimating the existing level of available incinerator treatment capacity and hence exaggerating the need for the EMERGE facility.*
184. *UKWIN state a significant proportion of the current residual waste stream used as incinerator feedstock is recyclable, and much of the non-recyclable elements in the residual waste stream are substitutable for recyclable materials.*
185. *Visual impact and effect on Green Belt: The proposed EMERGE incinerator constitutes inappropriate development in the Green Belt and would be a large-scale facility which is not in, or close to, the built-up areas of Nottingham and Mansfield/Ashfield and therefore is contrary to WCS Policy WCS4.*
186. *The applicant has not demonstrated the EMERGE incineration facility has been sized and located so as to minimise travel distances and the associated climate change impacts of road transport.*
187. *Reg. 25 Response: UKWIN maintains its objections to the planning application and requests Nottinghamshire County Council refuse planning permission for the development based on UKWIN's previously stated concerns and identified areas of policy conflicts. UKWIN wish to re-iterate the following concerns:*
- a. UKWIN maintain their view that the proposed EMERGE incinerator would have a net adverse climate change impact since it would result in the release of more greenhouse gasses when compared with sending the same waste to landfill.*
 - b. UKWIN consider the applicants case demonstrating need for the facility overestimates future residual waste arisings, underestimates the amount of residual treatment capacity, underestimates the potential future level of recycling and has failed to justify the assumptions used in their modelling.*
 - c. In terms of overestimating future residual waste arisings UKWIN consider the applicant's assessment of need fails to consider a range of factors which potentially could result in lower waste requiring treatment in the EMERGE. These factors include higher recycling*

rates, concerns that the Brexit deal could depress population growth and economic productivity, the diversion of plastic waste from disposal, the effect that Covid 19 could have on depressing economic growth, a reduction of residual waste and the potential introduction of an incinerator tax. These measures would result in less waste going to incineration nationally which would free up incineration capacity across England and undermine the case for need for the EMERGE incinerator.

- d. In terms of underestimating the level of recycling, UKWIN consider the EMERGE facility would prejudice the achievement of the Government's 65% recycling target and Nottinghamshire County Councils 70% target, the Government's 25 Year Plan for the Environment, including the aim to eliminate all avoidable plastic waste by the end of 2042 and to eliminate all avoidable waste by 2050.*
 - e. In terms of the availability of facilities in the regional area, UKWIN consider the applicant's appraisal of alternative facilities to manage waste which references levels of throughput rather than permitted maximum operating capacities and therefore underestimates the actual amount of incinerator capacity in the area by nearly 1 million tonnes in the year 2025. UKWIN also consider the applicant's appraisal fails to include several incinerators within a 2-hour drive which have a combined capacity of 3.4 million tonnes in 2025.*
 - f. UKWIN consider the applicant has failed to demonstrate a need for the facility beyond 2035. They also consider the documents which underpin the applicant's appraisal of need are not freely publicly available and therefore little weight should be given to them in the planning decision.*
 - g. UKWIN re-iterate that incinerators have been refused planning permission on grounds of visual amenity and effects to Green Belt.*
188. *UKWIN has provided supplementary representations within which they reiterate their concerns relating to the level of greenhouse gas emissions from the development and state these matters should be given significant, or even decisive weight in the planning balance and are capable of being treated as a freestanding reason for refusal. They state that the level of CO₂ emissions are not regulated through the Environment Permit and request the Council give very careful consideration the method of calculating the level of carbon emissions of the process in comparison to landfill disposal. UKWIN has supported their submission with documents prepared in connection with planning applications for EFW developments elsewhere in the UK which they state provide examples of critiques of similar proposals to that proposed for Nottinghamshire.*
189. **Nottingham and Nottinghamshire Extinction Rebellion Beyond Politics Group:** *Oppose the planning application on the grounds that the facility's operation would be incompatible with the UK's net zero goals and the Council's own Waste Core Strategy, both for carbon emissions and for best*

practice in waste management. These concerns are set out in more detail below:

190. Net Zero by 2050: In June 2019, the UK enacted a new emissions target. The target will require the UK to bring all greenhouse gas emissions to net zero by 2050, compared with the previous target of at least 80% reduction from 1990 levels. There is insufficient time before 2050 to allow investment in high emission intermediate technologies such as incineration; all effort should be put into net zero solutions.
191. Energy Supply: Electricity generated from waste is high carbon and its carbon emissions are generally twice as high as natural gas and at least ten times as high as emissions from wind and solar installations. The facility is therefore incompatible with the Climate Change Act 2008 (2050 Target Amendment) Order 2019, which aims to reach net zero carbon emissions by 2050.
192. The comparison used in the planning application between carbon emissions of energy from waste and landfill/fossil fuel emissions to conclude carbon savings from the project are based on a wrong assumption and fail to fully recognise that there are other sources of electricity, other methods of waste treatment and other ways of valuing short cycle carbon (the carbon that was only relatively recently absorbed by living matter).
 - The comparison of carbon emissions with other sources of energy is predicated on an assumption that only fossil fuels or energy from waste can provide electricity flexibly. This is a false assumption. Although Natural gas is currently used as a flexible electricity source the National Infrastructure Commission has proposed that the proportion of onshore wind, offshore wind and solar be increased from 50% to 65% by 2030.
 - Emissions from waste treatments other than landfill: There is not a simple choice between landfill and incineration for residual waste treatment. Increased use of anaerobic digestion to manage food, paper and card wastes would remove these materials from landfill sites, significantly reducing the level of carbon emissions resulting from the use of landfill sites and changing the current favourable balance that incinerators have in reducing carbon emissions.
 - The increased use of anaerobic digestion would generate additional compost material, directly off-setting the use of mineral fertilisers. The carbon calculations do not take account of these benefits.
193. Waste Management: The concept of waste hierarchy is outdated since it does not take account of the 2050 Net Zero target. The Committee on Climate Change 2020 Progress Report, page 22, states “Policy needs to accelerate the move to a circular economy” targeting emissions from waste incineration, particularly the combustion of non-bio wastes to achieve Net Zero emissions. This guidance has not yet been forthcoming into policy and law, but it is advocated that planners should rely heavily on the Committee on Climate Change guidance that has been published in the past year, i.e. after

the amendment of the Climate Change Act in their planning decision. Planning authorities need to prepare for separate food waste collections, which will become compulsory (promised by DEFRA in 2023) and to be able to justify how that food waste is utilised.

194. Waste Management Capacity Need: *The current and planned incinerator treatment capacity is greater than the level identified in the planning submission.*
195. The false assumption that waste will increase: *The Waste Strategy includes ambition to shift towards a more circular economy. There is every reason to assume that Government policies will lead to a rapid decrease in waste production over the next couple of decades meaning that there is not a need for this new waste incinerator.*
196. Pressure on waste supply chain: *The provision of additional waste incinerators reduces the level of recycling and encourages the production of waste.*
197. Use of Heat: *Although the facility is CHP ready there are no specific proposals to use the heat generated by the process.*
198. Carbon Capture: *There is a discussion in the planning submission of incorporating carbon capture, but the proposals are considered to be unrealistic with only vague suggestions that it might become possible eventually. It is hoped that the insubstantial suggestions will be dismissed.*
199. Air quality: *The local government guide on air quality states there is no safe level for particulate matter (PM10 and PM2.5), while NO2 is associated with adverse health effects at concentrations at and below the legal limits. Concerns are raised that breaches of air quality standards will not be properly regulated.*
200. Reg: 25 Response: *Attention is drawn to DEFRA's Resources and Waste Strategy Monitoring Progress Report. On page 28 of the report, In Table 2.1, DEFRA lay out the key indicators and measures necessary to ensure accountability. In the "Mitigating Climate Change" section, they state that the indicator should be carbon footprint (consumption based greenhouse gas emissions), measured in tonnes CO₂e. Extinction Rebellion question what steps have been taken in the Council to measure the estimated contribution of the proposed installation to the people of Nottinghamshire's carbon footprint. Extinction Rebellions have carried out their own calculation as set out below:*
 - *Total carbon budget to give the people of the planet a 50% chance of keeping below 1.5C global temperature from January 2021 = 355 billion tonnes.*
 - *Population of Notts/world population = 823,126/7.674 billion.*
 - *Therefore proportionate total carbon budget for the people of Notts = 38.1 million tonnes.*

- Fossil emissions predicted by UNIPER from EMERGE Centre (Appendix 8:4, Table 2): 181,591 tonnes CO₂e per year.
 - Over an estimated 20 years 2025-2045, total fossil emissions, 181,591 X 20 = 3.6 million tonnes.
 - This represents over 9% of the entire CO₂ emission budget for everything that goes on in the county, including hard to decarbonise elements of transport, manufacturing and aviation.
201. *Extinction Rebellion ask whether the Council acknowledge the urgent need to monitor the carbon footprint of new installations approved at planning meetings and the enormity and the urgency of what DEFRA is mandating. If the people of Nottinghamshire are to consume an equal share of the world's carbon budget with other people of the world, the Council have to have regard to the amount of carbon they have to "spend" and what demands there are on these budgets.*
202. **Nottingham Green Party:** *Object to the planning application.*
203. *The Nottingham Green Party state that they support the objection submitted by UK Without Incineration Network. In particular:*
204. *Uniper has failed to demonstrate a need for extra incineration capacity. They have seriously overstated the quantity of residual waste and understated incineration capacity in the surrounding area.*
205. *The proposed site is not near to urban areas where most waste is created so it will promote unnecessary transport of waste into the Green Belt.*
206. *It will generate large quantities of CO₂ (around 450,000 tonnes per year) with no realistic proposal to become carbon neutral.*
207. *Waste Core Strategy Policy WCS3 requires proposals to accord with the aim to achieve 70% recycling or composting of all waste by 2025. Uniper's projections assume a failure to achieve this level of recycling. It is proposing a huge incinerator as an alternative to waste reduction and recycling. It therefore conflicts with Policy WCS3.*
208. *Uniper's proposal does not adequately consider the implications of the EU Circular Economy Package or the Defra policy statement in support dated 30 July 2020. It fails to support the policy objectives of this package to minimise waste, promote resource efficiency and reuse waste as a resource. It also fails to adequately consider the implications of proposals in the Environment Bill (currently being considered by a Commons Committee), particularly the requirement for separate collection of food waste – which will greatly reduce the quantity of putrescible waste in residual waste requiring treatment.*
209. *Policy WCS4 states that large-scale waste treatment facilities will be supported in, or close to, the built-up areas of Nottingham and*

Mansfield/Ashfield. The site at Ratcliffe on Soar clearly conflicts with Policy WCS4.

210. *Uniper have failed to identify much of the existing and planned incineration capacity within their “2-hour drive time catchment area”. They have therefore failed to demonstrate compliance with Policy WCS12.*
211. *The electricity generated by EMERGE would have a carbon content that is around four times the current carbon intensity of grid electricity. Uniper’s calculations of carbon emissions massage down the net carbon emissions. Given the complete lack of commitment to any realistic means of capturing CO₂, no weight should be given to this.*
212. *Uniper estimates that the incinerator will work at an electrical efficiency of 26.1% – worse than the efficiency of UK coal-fired power stations which is currently around 32%.*
213. *Uniper suggests that the incinerator could supply heat as well as electricity but given the complete lack of commitment, no weight should be given to this.*
214. **Nottingham Friends of the Earth:** *Object to the planning application. The letter from Nottingham Friends of the Earth has a similar format to the letter received from the Nottingham Green Party and therefore raises similar issues to that representation.*
215. **Derbyshire and South Derbyshire Friends of the Earth:** *Object to the application on environmental and planning grounds. The particulates from plastic/biomass incineration cause deaths in breach of human rights. The process will discourage cheaper reduction, reuse, repair and recycling of waste. It is a carbon-intensive process, needing to be fuelled by burning diesel too. The ash produced has to be dumped in landfill. The ash-quench process wastes up to 20 Olympic swimming pools daily, Severn Trent has acknowledged that water abstraction in the East Midlands, is already over the limit. The application destroys global resources and worsens the climate emergency.*
216. **Stop Ratcliffe Incinerator Group:** *Object to the planning application.*
217. *The Stop Ratcliffe Incinerator Group have copied the Council into an email they have forwarded to The Ministry of Housing, Communities and Local Government wherein they request the Secretary of State to intervene and ‘call in’ the planning application for determination. The Group set out in their email that the reason for their request is because they consider the development conflicts with national policies on important matters including the need to limit climate change impacts, the need to manage waste in accordance with the waste hierarchy, the interpretation of policy for waste incineration plants, potential ecological impacts and the strength of public opposition to the development.*

218. *In terms of climate change, the group reference planning objections made by UKWIN to argue the EMERGE incinerator would have a net adverse climate change impact since it would result in the release of more greenhouse gasses when compared with sending the same waste to landfill and the electricity generated by the facility would have a higher carbon intensity than the electricity grids average meaning that the proposal does not fall within the NPPF definition of a 'low carbon' development and would hamper efforts to decarbonise the electricity supply. The facility does not incorporate carbon capture and storage and therefore is not consistent with policy advice from the Committee on Climate Change in terms of reaching net zero by 2050.*
219. *In terms of regional waste management it is argued that the facility would result in incineration overcapacity and hamper efforts to reduce, re-use and recycle. The group references a PINS decision relating to an energy from waste plant at Kemsley North in Kent where planning permission was refused over concerns that the capacity of the proposed facility would exceed the level of local need and thus threaten increases in recycling and composting.*
220. *In terms of ecological impacts, the group raise concerns about potential impacts on the Attenborough Gravel Pits Site of Special Scientific Interest (SSSI) and the adequacy of ecological surveys.*
221. Councillor Reg Adair and Councillor Matt Barney have been notified of the application.
222. Former County Councillor for the Leake and Ruddington Division Andrew Brown objects to the planning application on the grounds of excessive HGV vehicle movements, noting that the site will operate 24/7 creating several thousand movements annually. This contradicts the applicant's green statement, Ratcliffe site has rail links to the national network and these should be used. The infrastructure which allowed coal to be delivered must be converted to allow this, although it is acknowledged that some HGV activity will be inevitable. The existing rail rolling stock and employees if not used will become redundant and this must not be allowed to happen.
223. The issues raised are considered in the Observations Section of this report.

Observations

Policy assessment

224. Planning law requires that applications for planning permission should be determined in accordance with the development plan, unless material considerations indicate otherwise. The development plan for the area incorporates the following documents.
- Nottinghamshire and Nottingham Replacement Waste Local Plan: Part 1: Waste Core Strategy – adopted December 2013 (WCS).

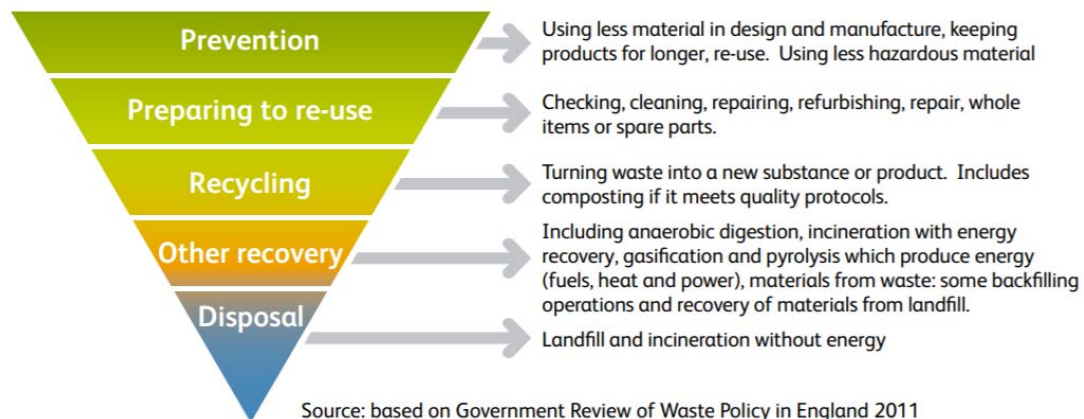
- Nottinghamshire and Nottingham Waste Local Plan (saved policies) – adopted January 2002 (WLP).
 - Rushcliffe Local Plan Part 1: Core Strategy – Adopted December 2014.
 - Rushcliffe Local Plan Part 2: Land and Planning Policies – October 2019.
225. Nottinghamshire County Council and Nottingham City Council are working together to prepare a new Waste Local Plan which will replace the saved policies of the Waste Local Plan (2002) and the Waste Core Strategy (2013). The new Waste Local Plan will provide the future planning strategy for waste management in Nottinghamshire and Nottingham until 2038 and will aim to provide sufficient capacity to meet future needs. It will also provide key policies against which the appropriateness of future waste management facilities can be assessed. However, since the plan is at a very early stage of preparation it has not advanced sufficiently to identify any potential future planning policies or site allocations to assess the merits of this planning application and guide the choice of waste sites against.
226. The National Planning Policy Framework (NPPF) is a material consideration in planning decisions. The NPPF incorporates a presumption in favour of sustainable development (NPPF, paragraph 10), wherein it is stated that planning authorities should:
- approve development proposals that accord with an up-to-date development plan without delay: or
 - where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, grant permission unless:
 - i. the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed, or
 - ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.
227. NPPF paragraph 2 states that planning decisions must also reflect relevant international obligations and statutory requirements, a point acknowledged in paragraph 2.1 of the WCS which acknowledges that whilst the plan sets out the local waste planning policy for Nottinghamshire and Nottingham, this is subject to the wider influences of national policy and legislation which establish the overarching principles for sustainable waste management, which are considered below.

Overarching Waste Management Policy

228. There is a raft of legislation, policy and targets which all seek to deliver more sustainable waste management. These drivers range from national to local; and include European Union (EU) legislation (such as the Landfill Directive

1999/31/EC and revised Waste Framework Directive 2008/98/EC) which have been transposed into English legislation through the Waste (England and Wales) Regulations 2011 (SI 2011/988) with national policy on waste set out within the Waste Management Plan for England (2013). The Government has recently consulted on an updated Waste Management Plan, the consultation closing on 15th October 2020.

229. The key thread within all these documents is that they encourage and promote the delivery of sustainable waste management underpinned through the application of the Waste Hierarchy. This is a guide in order of preference, from the top down, of sustainable waste management, which gives top priority to preventing waste in the first place. When waste is created, it gives priority to preparing it for re-use, then recycling, then recovery, and last of all disposal (e.g. landfill). Figure 2.1 of the WCS identifies the waste hierarchy and is set out below. WCS Policy WCS3: Future Waste Management Provision seeks to ensure that planning decisions are made in the context of the waste hierarchy.



230. To achieve compliance with the waste hierarchy, waste management policy has incentivised the prevention and re-use of waste as far as practical and driven a major increase in recycling and composting. The waste hierarchy does not say everything should be recycled regardless of cost or practicality. If material is so contaminated that the resources required to clean and process it for recycling would outweigh the benefits of recycling, then government acknowledges that it is often better to recover energy from the waste stream rather than process it further to extract these materials. Such waste is referred to as residual waste. The DEFRA publication Energy from waste - A guide to the debate (February 2014 (revised edition)), paragraph 18 defines residual waste as:

'Residual waste is mixed waste that cannot be usefully reused or recycled. It may contain materials that could theoretically be recycled, if they were perfectly separated and clean, but these materials are currently too contaminated for recycling to be economically or practically feasible. It may also be that there is currently no market for the material or it is uneconomic to take to market. An alternative way of describing residual waste is 'mixed waste which at that point in time would otherwise

go to landfill'. Generally, energy recovery should be from residual waste and other wastes for which energy recovery represents the most feasible option e.g. low-grade wood waste.'

231. Waste policy seeks to minimise the use of landfill for residual waste disposal and encourage the use of this waste within recovery facilities where it is capable of being processed into useable forms of energy.
232. The Waste (England and Wales) Regulations 2011 requires everyone involved in waste management to use all reasonable measures to apply the waste hierarchy (except where, for specific waste streams, departing from the hierarchy is justified in lifecycle thinking on the overall effects of generating and managing the waste). This legal obligation on waste producers and transferors provides over-arching controls within the waste industry and assists in ensuring that waste that should be recycled is not sent to an EfW facility/landfill for treatment. The regulations are regulated by the Environment Agency through the Environmental Permitting (England and Wales) Regulations 2010.
233. Compliance with the waste hierarchy is achieved across the waste industry and not singularly within individual management facilities. It is not incumbent on individual waste recovery facilities to provide management facilities for the treatment of waste at all levels within the hierarchy. The waste permitting system ensures that waste is sent to appropriate facilities for treatment and therefore would ensure that segregated recyclable waste is not sent to the EMERGE facility for treatment.
234. This planning application should be determined on the basis that waste regulations will properly be applied and enforced. These regulations will ensure that the EMERGE facility processes residual waste and does not manage waste that would otherwise be destined for reuse, recycling or composting.
235. The Government sees a long-term role for energy from waste which it generally views as a recovery activity in the context of the waste hierarchy. However, to be classed as recovery, energy from waste facilities must meet the requirements set out in the Waste Framework Directive which incorporate an efficiency calculation (known as the R1 formula) which effectively sets a threshold by which to determine whether the operation of an incineration plant can be considered as a more efficient recovery operation or lower efficient disposal facility. Determination that a plant satisfies the R1 efficiency criteria is carried out by the Environment Agency, in a process which runs parallel to the Environmental Permit submission. Obtaining R1 status is not mandatory for energy from waste plants, but is encouraged by Government. R1 certification for the EMERGE facility has not currently been requested by the applicant from the EA. An energy from waste plant that does not have R1 certification is considered as disposal in the context of European law and the waste hierarchy.

236. The Environmental Statement incorporates efficiency calculations using the R1 formula to demonstrate that the design of the EMERGE facility is capable of achieving the R1 efficiency benchmark. This calculation demonstrates the EMERGE facility would achieve a predicted 'R1' efficiency score of 0.76 which is above the threshold set out within the WFD (0.65) to be classed as recovery rather than disposal (facilities below 0.65 are classed as disposal). To ensure the EMERGE facility operates at a level of efficiency that enables it to be legally defined as a recovery operation it is recommended that a planning condition is imposed to require the operator to apply for and obtain an R1 permit from the Environment Agency prior to the plant being commissioned.
237. This approach ensures the WPA has legislative control to satisfy itself that the design configuration of the EMERGE facility meets the R1 efficiency criteria and ensures the planning policy assessment can be taken on the basis that the facility manages waste as a recovery rather than a disposal activity in the context of the waste hierarchy.
238. On the balance of the evidence before the WPA the plant is designed and configured to ensure it meets the required level of efficiency to operate as a recovery facility and therefore the planning application has been assessed on this basis. The proposed planning condition would provide appropriate regulation for this. The use of residual waste as a fuel to generate energy within the EMERGE facility would therefore assist in the diversion of waste from landfill disposal and deliver waste management at a higher level in the waste hierarchy. The benefits provided by the development in the context of delivering sustainable waste management are given significant positive weight in the overall planning balance.

National Planning Policy for Waste

239. European and national waste legislation is transposed into waste planning policy at both a national and local level.
240. At a national level, waste planning policy is most clearly stated within the National Planning Policy for Waste (NPPW) issued in October 2014 and the supporting Planning Practice Guidance on waste.
241. The NPPW encourages waste planning authorities to work collaboratively with communities and consider through their local plans what sort of waste facilities are needed and where they should go. The policy seeks to protect the local environment and local amenity by aiming to prevent waste facilities being placed in inappropriate locations. In respect of energy recovery facilities, the NPPW encourages the choice of sites which enable the utilisation of the heat produced as an energy source in close proximity to suitable potential heat customers.
242. The NPPW identifies that positive planning plays a pivotal role in delivering new waste infrastructure that assists with delivering sustainable development

in line with the waste hierarchy and resource efficiency, ensuring waste management is considered alongside other spatial planning concerns, seeking to engage communities and businesses to take more responsibility for their waste and helping secure the re-use, recovery or disposal of waste without endangering human health or the environment. The NPPW acknowledges that:

- Proposals for waste management facilities such as incinerators can be controversial, acknowledging that they may not reflect the vision and aspirations of local communities and can lead to justifiable frustrations.
- Development plans should identify the amount of waste requiring different types of treatment and use this data to identify any shortfalls in capacity.
- The choice of site should acknowledge the proximity principle for managing mixed municipal waste but recognise that new facilities will need to serve catchment areas large enough to secure the economic viability of the plant.
- A broad range of locations should be considered with particular priority given to the re-use of previously developed land and sites identified for employment uses. Site allocations should also give consideration to the potential to utilise residual heat from energy from waste schemes.
- When determining planning applications, waste planning authorities should only expect applicants to demonstrate the quantitative or market need for new waste management facilities where proposals are not consistent with an up to date local plan. Impacts to the local environment and amenity should be considered but it is not necessary to carry out detailed assessment of epidemiological and other health studies on the basis that these controls would be provided through the pollution control regime.
- Appendix B of the NPPW identifies a number of locational criteria for testing the suitability of sites and areas for new waste development. Matters requiring consideration include consideration of water quality and flood risk, land instability, landscape and visual impacts, nature conservation, conserving the historic environment, traffic and access, air emissions including dust, odours, vermin and birds, noise, light and vibration, litter, and potential land use conflict.

Assessment of Nottinghamshire Waste Planning Policy in relation to the development of the EMERGE Facility

243. The WCS sets out the strategic planning policies for the development of future waste management facilities within Nottinghamshire and Nottingham. The plan identifies how much waste is produced within these areas, how this is managed, forecasts future needs and guides how much and what type of additional waste management capacity will be required up to 2031. The WCS sets out strategic policy and criteria on the general location to guide future development but it does not identify any specific sites. The WCS is the basis for determining planning applications for all future waste management

development within the area and incorporates key policies for the assessment of the EMERGE planning application.

244. The vision of the WCS is in line with national waste legislation and planning policy. The plan aims to manage waste locally and sustainably, by encouraging the production of less waste and its re-use where practical. The WCS sets an ambitious 70% recycling target for all wastes by 2025, exceeding national targets which are to achieve 50% recycling at 2020, and calculates the amount of waste management infrastructure needed on the premise that 70% of waste is recycled. In terms of the management of residual waste, the plan is supportive of the development of new energy recovery facilities to use the waste as a resource and divert waste from landfill disposal which shall only be used when all options have been exhausted. The plan aims to ensure there is sufficient waste management capacity to deal with the amount of waste generated in Nottinghamshire and Nottingham.
245. Presumption in favour of Sustainable Development: WCS Policy WCS1: Presumption in favour of sustainable development sets out that a positive approach will be taken in dealing with new waste development that reflects the presumption in favour of sustainable development contained in the NPPF. It states that planning applications that accord with the policies in the WCS (and, where relevant, with policies in other plans which form part of the Development Plan) will be approved without delay, unless material considerations indicate otherwise, taking into account whether any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as a whole; or specific policies in the NPPF indicate that development should be restricted. An assessment of the level of compliance with WCS1 is made within the conclusions section of the report where an assessment of compliance with the development plan is made.
246. Waste Management Capacity and Need for the Facility: The vision and strategic objectives of the WCS set out a commitment to support the waste industry to develop new waste infrastructure across Nottinghamshire and Nottingham to enable waste to be managed locally and sustainably. The key policy within the plan for delivering this objective is WCS Policy WCS3: Future waste management provision which is set out below:

Policy WCS3 Future waste management provision

The Waste Core Strategy will aim to provide sufficient waste management capacity for its needs; to manage a broadly equivalent amount of waste to that produced within Nottinghamshire and Nottingham. Future waste management proposals should accord with our aim to achieve 70% recycling or composting of all waste by 2025. Proposals will therefore be assessed as follows:

- a) priority will be given to the development of new or extended waste recycling, composting and anaerobic digestion facilities;
- b) new or extended energy recovery facilities will be permitted only where it can be shown that this would divert waste that would otherwise need to be disposed of and the heat and/or power generated can be used locally or fed into the national grid;
- c) new or extended disposal capacity will be permitted only where it can be shown that this is necessary to manage residual waste that cannot economically be recycled or recovered.

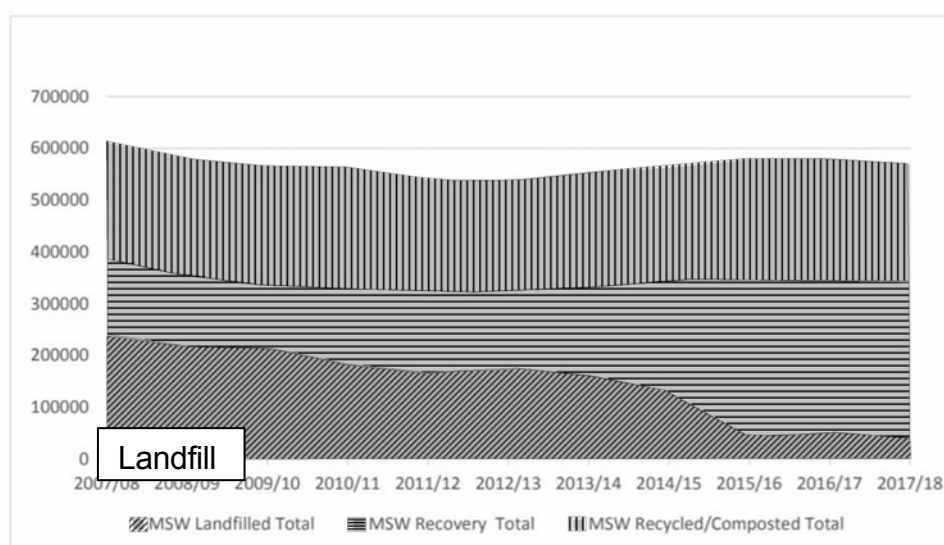
247. Policy WCS3 seeks to ensure that when new waste management proposals are developed they assist with the movement of waste up the waste hierarchy and contribute to achieving the aims of the plan which seek to increase the level of recycling and composting of waste to 70%, by giving priority to the development of new or extended waste recycling, composting and anaerobic digestion facilities, alongside the development of new energy recovery capacity to manage about 20% of the waste, whilst giving lowest priority to landfill to reduce disposal inputs to 10% or less.
248. The proposed EMERGE facility is classified as a recovery facility and would fall within criterion b of the policy. Where the use of an energy recovery facility results in waste being diverted from landfill it would move the management of that waste up the waste hierarchy in accordance with the objective of WCS Policy WCS3.
249. Paragraph 7 of the NPPW states that waste planning authorities should only expect applicants to demonstrate the quantitative or market need for new or enhanced waste management facilities where proposals are not consistent with an up-to-date Local Plan. Demonstrating compliance with the WCS includes ensuring the development is compliant with Policy WCS3. Since compliance with WCS Policy WCS3 is only achieved where the level of waste management capacity broadly equates to the amount of waste to that produced within the plan area, it is necessary to make an assessment of waste treatment capacity, areas of shortfalls and therefore need. There is therefore some policy tension between the NPPW Paragraph 7 and the WCS in terms of the requirement to prove there is a need for the development. Notwithstanding the policy tension, the applicant has supported their planning application with an assessment of need for the development to enable its assessment against WCS Policy WCS3. In the wider context of the assessment of the planning application it is acknowledged that where it is demonstrated there is a need for a development, this is a material planning consideration which weighs in its favour.

250. In terms of assessing the level of waste arisings within the Nottinghamshire and Nottingham area and calculating any capacity shortfalls in management capacity the starting point is Chapter 4 of the WCS. Chapter 4 incorporates data setting out the levels of waste produced within the plan area and the availability of facilities to process the waste. The data incorporates projections of waste arisings in future years up to 2031 and calculates the quantity of waste management capacity that is required over this period, taking account of increases in recycling up to 70%, the recovery of 20% of waste and the movement away from landfill disposal, reducing the level of waste sent to landfill to 10% to identify any capacity gaps or shortfalls. This data has been monitored and reviewed through the Waste Local Plan Annual Monitoring Report.
251. In summary, Table 5 of the WCS identifies that within the plan period it is anticipated there would be a shortfall of 194,000 tonnes per year of recovery capacity to manage residual commercial and industrial waste. However, the baseline capacity figures for Nottinghamshire's recovery capacity incorporated in the WCS included circa 100,000tpa processing capacity which would be provided by a third line at Eastcroft Incinerator. Although the third line at Eastcroft received planning permission in 2008 and this planning permission has been partially implemented, the third line has not been constructed and thus is not available to process waste. The actual shortfall in processing capacity identified in the WCS is more appropriately considered to be 294,000 tonnes per year.
252. The projections within the WCS have been calculated on the basis that a recycling rate of 70% would be achieved. If this level of recycling was not achieved a higher proportion of the overall waste stream would be processed as residual waste which requires management either through recovery or disposal. The projection also assumes that 10% of waste will continue to be disposed into landfill, but in the context of the waste hierarchy some of this waste may be better managed within a recovery facility. It is also noted that there is a significant shortfall of non-hazardous landfill capacity within Nottinghamshire with the last remaining operational site at Staple Quarry near Newark due to close in 2021.
253. The most recent 2018/2019 annual monitoring report identifies that recycling rates for local authority collected waste across the combined Nottinghamshire and Nottingham areas was 38.8% for the year (43.2% in Nottinghamshire and 26.5% in Nottingham city). The recent trends in recycling performance are identified in the table below:

Year	Nottinghamshire County Council (%)	Nottingham City Council (%)
2013 / 14	43.3	32.9
2014 / 15	42.8	32.9
2015 / 16	42.5	30.6
2016 / 17	44.2	29.8
2017 / 18	43.7	29.9
2018 / 19	43.2	26.5
Average	43.3 %	30.4 %

254. The annual monitoring report incorporates a graphic chart which illustrates how collected municipal solid waste has been managed over the 2007-2017 period and shows that recycling/composting rates over this period are generally level with no upward trend to give any confidence that the WCS target of 70% recycling of all waste by 2025 will be achieved without major investment or radical policy intervention. The main change in waste management practice over this period is that much higher levels of municipal waste is now managed within recovery installations rather than through landfill disposal with the overall recovery rate for 2018/19 being 46.3%.

Figure 2: Recycling, Recovery and Landfill Disposal since 2008/09



255. A more detailed analysis of residual local authority collected waste management arrangements identifies that most of Nottingham city's municipal residual waste is managed within Eastcroft (circa 100,000 tonnes per annum). In terms of the county's residual local authority collected waste, three facilities are used as set out below.
- Circa 70,000 tonnes per annum within Eastcroft (delivered direct to the site from Broxtowe, Gedling and Rushcliffe)

- Circa 65,000 tonnes per annum to the Veolia Energy Recovery Facility in Sheffield (mainly from Bassetlaw and Newark and Sherwood via transfer stations in Worksop and Newark)
 - Circa 60,000 tonnes per annum to Ferrybridge MF2 (mainly Ashfield and Mansfield via the interim processing facility in Kirkby-in-Ashfield)
256. The contracts for sending waste to these facilities are on long term arrangements with the Eastcroft contract running until 2030 and the Sheffield and Ferrybridge contracts running until 2033.
257. Data for commercial and industrial (C&I) waste is not recorded to the same level of detail as municipal waste. The annual monitoring report provides two figures for the amount of C&I waste:
- Calculations derived from the last national survey of C&I waste arisings carried out in 2010 with an allowance for waste growth and a regional split estimate a total of 1.2 million tonnes of C&I waste was produced in the plan area in 2017 (before recycling rates are applied).
 - Data originating from the Environment Agency's Waste Data Interrogator produces a lower estimate of C&I waste arisings of 530,000 tonnes produced in the plan area in 2018 (before recycling rates are applied).
258. The Environment Agency data is considered to be more representative of the quantity of commercial and industrial waste produced in the plan area.
259. No recycling figures are quoted in the monitoring report for C&I waste, but DEFRA data indicates that a recycling rate of 52% for C&I waste is currently being achieved. Based on this level of recycling it is calculated that the quantity of residual C&I waste arisings within the plan area requiring treatment is between 275,600 and 624,000tpa.
260. Nottinghamshire and Nottingham's most recently published annual monitoring report identifies that the area has a limited amount of recovery and disposal capacity to manage its residual waste arisings. In terms of recovery capacity, the only operational site is Eastcroft Incinerator which has an operational throughput of circa 170,000tpa. In terms of disposal capacity, the plan area has one non-hazardous landfill at Staple Quarry which is almost full and scheduled to close in the next 12 months.
261. Almost all the available recovery capacity within Eastcroft is tied into long term contracts for the management of local authority collected residual waste originating from Nottingham City and part of Nottinghamshire with the remaining local authority collected residual waste (125,000tpa) and almost all the C&I residual waste requiring disposal/recovery being managed outside of the plan area.
262. Since the combined recycling rate is failing to achieve the 70% target set out within the WCS, the direct result is that a much higher proportion of the waste stream will be collected as residual waste and either sent to an energy recovery facility for treatment or disposed in a landfill. Therefore, whilst the

WCS projections identify a 294,000tpa recovery capacity shortfall, the current level of capacity shortfall is likely to be much greater and this shortfall will continue if recycling rates do not dramatically improve over future years. This is a material consideration which should be taken into account when determining this planning application.

263. The applicant's planning submission acknowledges that the waste projections within Chapter 4 of the WCS are now some years old and the recycling targets which underpin these capacity thresholds appear unlikely to be achieved. The applicant has therefore re-appraised the waste data taking account of these factors. The methodology used for undertaking this re-appraisal is set out below:
 - a. A re-appraisal of how much waste arises within the Nottinghamshire and Nottingham area.
264. The 2018/19 annual monitoring report shows that the combined total for local authority collected waste within Nottinghamshire and Nottingham was 583,602 tonnes, consisting of 490,000 tonnes of household waste and 93,602 tonnes of other waste collected by local authorities. By comparison the WCS uses data from 2009 when the total level of collected waste was 560,000 tonnes. Although the applicant's model does not consider there will be any waste growth per household, it does identify that population growth resulting from new housing development will increase the amount of household waste collected by an additional 76,000 tonnes per year by 2038. In terms of other waste collected by local authorities, the model considers this will increase by 1% a year, thus a compound growth rate of 1% a year on 93,602 tonnes until 2038 results in a calculated increase of the other waste by 16,186 tonnes.
265. The annual monitoring report notes that there is a lack of reliable data for commercial and industrial (C&I) waste arisings referencing two separate surveys which give markedly different levels of C&I arisings. For the purpose of this assessment the applicant has referenced data from an Environment Agency survey which estimates the level of C&I waste arisings in 2018 was 530,000 tonnes, and is notably lower than the 1.2 million tonnes projected from a national survey of C&I waste originating from 2010. An assumption that there is a projected 1% growth in the 530,000tpa waste arisings data has been used.
266. The applicant has identified that there would also be waste originating from the construction and demolition waste sector of which 5% would be suitable for treatment within the EMERGE facility equating to 44,725tpa in their calculations.
 - b. The quantity of residual waste requirement treatment and consideration of recycling rates.
267. The applicant has assessed the key intervention measures set out within the Defra February 2019 publication 'Our Waste, Our Resources; A Strategy for England' to consider how these have potential to materially increase the amount of recyclable/compostable waste that is separated from the residual

waste stream to make an assessment of the expected level of recycling performance in future years. The strategy focusses on eliminating avoidable plastic waste at the producer end and by recycling/re-using plastics and eliminating food waste in landfill. The strategy acknowledges that if anaerobic digestion or composting is not possible then food waste should be treated via energy from waste in preference to landfill. The applicant has calculated that food waste reduction, legislation for separate food waste collection, the roll out of a deposit return scheme and extended producer responsibility for packaging have potential to increase the level of waste segregation and recycling. However, the applicant considers the compound effect of these measures by 2030 on English annual residual waste quantities would be 3.28 million tonnes and thus significantly less than the 10 million tonnes which the Strategy believes is potentially achievable. The applicant therefore concludes that the interventions will not increase the level of recycling performance to the 70% target within the WCS. The applicant also notes that the DEFRA targets in the strategy set a goal for England for municipal waste recycling targets of 55% by 2025, 60% by 2030 and 65% by 2035, noting that these are not firm targets and there is a review clause for these targets in 2028 before the Government aspires to progress beyond 55%. The applicant therefore concludes the 70% recycling target in the WCS is overly optimistic and unrealistic. The applicant's appraisal is that a more realistic and achievable recycling rate would be for 50.1% for household waste and 67.5% for C&I waste by 2035.

- c. What existing operational residual waste treatment capacity is present within the given area?
- 268. There is only one operational facility within Nottinghamshire and Nottingham which could process the intended residual waste stream, this being Eastcroft which has an operational throughput of 170,000tpa.
- d. Calculation of quantity of residual waste requiring treatment and calculation of 'capacity gap'.
- 269. The applicant's assessment of Nottinghamshire's and Nottingham's waste capacity gap based on the above assumptions is set out in their planning supporting statement and reproduced in the table below:

	2020 (t)	2020 Recycling (%)	2020 (t)	2038 Recycling (%)	2038 (t)
Household	490,000	41	289,100	51	240,100
Other LACW	93,602	41	55,225	51	45,864
Household Waste Growth (Scenario B 'No Change') adds 76,000 tonnes in 2038 pre-recycling				51	37,240
Other LACW growth (as per C&I Scenario A 'Low Growth') adds 16,848 tonnes in 2038 pre-recycling				51	8,255
C&I	606,000	52	290,880	67.5	196,950
C&I Waste Growth (Scenario A 'Low Growth') adds 134,000 tonnes in 2038 pre-recycling				67.5	43,550
CD&E (Scenario A 'No Change' – 5 %)	1,150,000		57,500		57,500
Total Waste			692,705		629,459
Operational Residual Waste Treatment Capacity			170,000		170,000
Capacity Gap			522,705		459,459

270. Based upon the above model which utilises the lower figure for C&I arisings, the applicant calculates that the Nottinghamshire and Nottingham area has a residual waste treatment capacity gap of 522,705tpa at 2020 (calculated using current recycling rates) and this is forecast to be 459,459tpa at 2038 using projected recycling rates of 51% for household waste and 67.5% for C&I waste. This is comparable to the annual throughput of the EMERGE facility which is designed to accept circa 472,100tpa of residual waste.
271. If the applicant's waste model was re-run on the assumption that a 70% rate of recycling and composting was achieved across all sectors and thus achieve the targets set out within WCS Policy WCS3, the applicant calculates there would be a shortfall in residual waste recovery capacity of between 333,000tpa and 534,000tpa depending on the level of C&I waste arisings that are used in the model.
272. If the applicant's waste model was re-run on the basis that recycling levels for local authority collected waste reach the national 65% target rate by 2035 set out in the DEFRA publication, Our waste, our resources, a strategy for England (December 2018) and the Government's Circular Economy Package Policy Statement (July 2020), with other waste streams modelled at a 67.5% recycling rate (there are no specific recycling targets relating to C&I and CD&E waste streams in the above documents) it is calculated there would be a shortfall in residual waste recovery capacity of 364,526tpa and 562,526tpa in 2038 depending on the level of C&I waste arisings that are used in the model.
273. It is widely acknowledged that forecasting future waste management needs is a complex process involving many variables and uncertainties in terms of predicting future behaviour, the level of waste arisings, future legislative obligations, changes in recycling rates, when infrastructure projects are likely

to come online, and how much waste they will divert from landfill. These factors result in significant variances in the results identified through waste modelling. The complexities and uncertainties of forecasting future waste management requirements are acknowledged within the NPPW which cautions against the use of spurious precision in assessing quantities of new capacity required.

274. Whilst the WCS aim to push towards an aspirational target for 70% of all waste to be recycled by 2025 is commendable and the correct ambition to follow, it is not matched by the current recycling performance level which show that 38.8% of local authority collected waste is currently recycled in the plan area. There is no real evidence of any upward trend in recycling performance over recent years to support the conclusion that the level of recycling will increase to 70% in the next five years. The lower levels of recycling performance are considered to be a material consideration within the determination of this planning application.
275. Legislative changes proposed within the Environment Bill 2020 are to be carried over to the next parliamentary session and incorporates proposals to introduce extended producer responsibility for waste, more consistent recycling collections including weekly separate food waste collection and the reduction of plastic content in residual waste by phasing out non-recyclable plastic in the wider economy. Whilst acknowledging these changes will support the greater separation of waste streams affecting the composition of residual waste and support greater levels of recycling, it is uncertain whether they will deliver the major step changes in recycling rates that are required to achieve the 70% overall target set out within the WCS or the 65% target set out in the DEFRA Waste Resources Strategy which does incorporate a review clause in 2028 before the 2030 60% recycling target is reached. The applicant's concerns that the key intervention measures incorporated within the Defra February 2019 publication 'Our Waste, Our Resources; A Strategy for England', which target municipal waste recycling targets of 55% by 2025, 60% by 2030 and 65% by 2035, are unlikely to be achieved are therefore acknowledged.
276. If the 70% recycling/composting rate for all waste streams targeted in the WCS was not achieved by 2025, which looks almost certain, or the 65% DEFRA municipal waste recycling target was not achieved by 2035, this would directly result in a greater proportion of the collected waste being treated as residual waste. If a decision was made to restrict the availability of residual waste treatment capacity to 30%/35% of the overall/municipal waste stream pursuant to WCS/DEFRA strategy targets and these levels of recycling were not achieved, there would be a capacity shortfall for the treatment of this waste within the Nottinghamshire and Nottingham area and this would necessitate the treatment of the surplus residual waste outside the area (if spare capacity exists), including abroad, contrary to the objective of WCS Policy WCS3, or the waste would be consigned to landfill, contrary to the objectives of the waste hierarchy with this landfill being undertaken outside the Nottinghamshire area due to the absence of operational facilities. Consequently, there is an important 'policy' point to ensure that additional

residual waste treatment capacity is not restricted on the basis that waste projections assume very high recycling levels, thereby allowing the waste industry to plan for, and deliver, infrastructure based upon a realistic market assessment.

277. It is concluded that there is a residual waste capacity shortfall within the Nottinghamshire and Nottingham area. Whilst the WCS identifies this gap as being 294,000tpa, this figure is calculated from underlying data which is now a decade old and fails to take account of more recent waste trends, notably the level of recycling, and an assumption that 10% of waste will be disposed to landfill in the area despite there being no operational non-hazardous landfill sites post 2021 to receive this waste. These are material considerations which should be taken into account in the determination of this planning application. The applicant's re-appraisal of the waste data uses a reasonable methodology. Whilst acknowledging that the applicant's appraisal utilises a lower level of recycling/composting performance for all waste streams than the 70% target by 2025 set within the WCS, or the 65% target for recycling municipal waste by 2035 incorporated in the DEFRA strategy, the current trends in recycling performance provide support for the applicant's assessment that these high levels of recycling potentially will not be achieved. This is a material consideration in projecting the levels of treatment capacity required. WCS Paragraph 7.16 acknowledges this fact and states *'that there is a risk that these (recycling) targets may not be achieved and that there needs to be some flexibility in our approach. If annual monitoring evidence shows that the 70% recycling and composting target is unlikely to be achieved then this may become a material consideration in determining planning applications for other types of waste management facilities and may even trigger an early review of this policy'*.
278. Paragraph 60 of the DEFRA publication, Energy from Waste: A guide to the debate acknowledges that evidence from other European counties is that the availability of energy recovery facilities does not stop people from recycling or limits improvements in recycling levels. For example, Germany extensively utilises energy from waste to divert residual waste from landfill, whilst still being one of the top performers for recycling.
279. The Nottinghamshire and Nottingham area currently exports a large proportion of its residual waste arisings outside the plan area for treatment because of the current shortfalls in recovery and disposal capacity in the plan area. This is contrary to WCS Policy WCS3 and Strategic Objective 6 of the plan which aim to ensure the plan area provides sufficient waste management capacity to manage a broadly equivalent amount of waste to that produced within Nottinghamshire and Nottingham. A number of options have been used to model the size of shortfall using the best available data and information. These models identify that the level of projected shortfall is potentially within a range between the 294,000tpa identified in the WCS and 562,526tpa, but may currently be as much as 900,000tpa in a worse case scenario. The applicant's appraisal concludes that the shortfall in residual waste processing capacity would be 459,459tpa at 2038 which broadly equates to the capacity proposed within the EMERGE facility.

280. There is no statistical data available to identify how much of the waste currently exported out of Nottinghamshire and Nottingham for treatment is disposed in landfill or treated in an energy recovery facility and therefore it is not possible to state that the development of the EMERGE facility would directly divert this waste from landfill disposal or divert the waste from existing operational recovery facilities rather than directly replacing landfill. However it must be acknowledged that waste management does not stop at the administrative boundaries of Nottinghamshire and Nottingham and waste will readily be transported across local authority boundaries, operating as part of a network of facilities across a wider regional area. Data presented in the later section of this report demonstrates the UK is still heavily dependant on landfill and waste exports for the management of its residual waste, and therefore when assessed in the wider context of waste management it is considered that the EMERGE facility would result in the diversion of waste from disposal and thus provide management at a higher level in the waste hierarchy in accordance with the policy requirement of WCS Policy WCS3(b).
281. The NPPW readily acknowledges that waste modelling is not an exact science and therefore cautions against the use of '*spurious precision*' when calculating the level of new capacity required (NPPW paragraph 2). It is clear however that the 474,000tpa processing capacity of the EMERGE facility sits comfortably within the range of projected shortfall and therefore it is concluded that WCS Policy WCS3 is supportive of the development and its contribution that it will make to managing Nottinghamshire and Nottingham's residual waste arisings sustainably in accordance with the waste hierarchy.
282. Taking all the evidence before the Council into account, the waste management benefits of the scheme and compliance with WCS Policy WCS3 are an important consideration in the assessment of this planning application. Whilst it is clear that there is a shortfall of residual waste management recovery capacity within Nottinghamshire and Nottingham which is calculated to broadly equate to the operational capacity of the EMERGE facility, it is acknowledged that the projections of future residual waste requiring treatment in the plan area identify some scenarios where the capacity of the EMERGE facility potentially exceeds Nottinghamshire and Nottingham's level of need. Since WCS Policy WCS3 seeks to ensure the level of waste management capacity is broadly equivalent to the amount of waste produced in the plan area, the uncertainties regarding the precise level of waste requiring treatment, particularly in future years, means that the need for the facility in the context of WCS Policy WCS3 should be given moderate beneficial weight in the planning balance, rather than substantial weight.
283. Managing waste from outside Nottinghamshire and Nottingham: The aim of the WCS, as identified within Strategic Objective 6 is to ensure there is sufficient waste management capacity to treat at least the equivalent waste to that produced in the area. It is important in policy terms that this aim is to not over-interpreted to conclude that waste management facilities will only be permitted within Nottinghamshire and Nottingham which process waste originating from the area. This is made clear in Paragraph 6.4 of the WCS

which acknowledges that cross-boundary movements of waste are inevitable and should be allowed where they are shown to be sustainable.

284. The EMERGE facility is located close to the Nottinghamshire/ Derbyshire/Leicestershire border. The location of the site means that in many cases waste which originates from outside the County would actually travel a similar or shorter distance than waste from within Nottingham. For example, Retford is nearly 50 miles from the EMERGE site and more than 1-hour drive by car. This is a comparable distance to many major cities such as Stoke on Trent, Wolverhampton, Birmingham, Coventry, Northampton, Peterborough and Lincoln and the site is actually closer to Derby and Leicester than it is Mansfield. It is also acknowledged that the EMERGE facility has good access to the strategic road network and in particular the M1 meaning that a 1 - 2 hour journey time from the EMERGE site would stretch the distance of potential waste imports over a significant distance. It therefore follows that bringing waste from outside the Nottinghamshire area does not necessarily incur greater travel distances than managing Nottinghamshire's own waste.
285. Paragraph 7.53 of the WCS acknowledges that waste movements do not stop at local authority boundaries and that it may make environmental and economic sense for waste to be managed at a facility in a neighbouring county if this is closer or means that the waste will be managed further up the waste hierarchy. Paragraph 7.54 explains that the WCS takes a pragmatic approach to encourage provision for the equivalent of Nottinghamshire and Nottingham's own waste, whilst allowing for the possibility of a reasonable exchange of waste movements.
286. Defra's Energy from Waste guide (paragraphs 152 and 153) expands further on this matter, identifying that the 'proximity principle' is often over-interpreted and it actually does not require all waste to be managed as close to its source as possible to the exclusion of other considerations, and that local authorities individually do not require the infrastructure required to do so. The proximity principle stems from Article 16 of the EU's revised Waste Framework Directive (2008/98/EC) and requires member states to establish an integrated and adequate network of waste disposal installations and of installations for the recovery of mixed municipal waste collected from private households, requiring this waste to be managed in one of the nearest appropriate installations, by means of the most appropriate methods and technologies, in order to ensure a high level of protection for the environment and public. Notably Article 16 does not impose the duty to manage residual C&I waste in accordance with the 'proximity principle'.
287. The EMERGE facility would operate as a 'merchant' facility with the plant seeking to source its waste from contracts with private companies or potentially surrounding local authority waste collection companies once the facility is built and the operator has operational capacity to fulfil any contract obligations. Because the applicant cannot readily identify the origins of waste feedstocks, concerns have been raised by the local community that the

facility would manage waste from a wide geographic area utilising 'non-local' waste.

288. The planning application submission acknowledges that the EMERGE facility would process waste originating from outside the Nottinghamshire and Nottingham area, identifying that it would look to source waste from up to a two-hour drive.
289. WCS Policy WCS12: Managing non-local waste sets out the local policy for managing these waste streams and is set out below:

Policy WCS12 Managing non-local waste

Waste management proposals which are likely to treat or dispose of waste from areas outside Nottinghamshire and Nottingham will be permitted where they demonstrate that:

- a) the envisaged facility makes a significant contribution to the movement of waste up the waste hierarchy, or
- b) there are no facilities or potential sites in more sustainable locations in relation to the anticipated source of the identified waste stream, or
- c) there are wider social, economic or environmental sustainability benefits that clearly support the proposal.

290. The policy does not prohibit non-local waste being processed and identifies criteria under which this will be permitted.
291. It has been demonstrated in the preceding section of this report that the processing capacity of the EMERGE facility is broadly equivalent to the residual waste arisings of Nottinghamshire and Nottingham and therefore the development is supported by WCS Policy WCS3. Therefore, whilst it is readily acknowledged that the waste inputs into the EMERGE facility would result in cross boundary movements of waste, these movements are primarily as a result of industry-wide waste management practices rather than as a result of the processing capacity of the EMERGE facility significantly exceeding the capacity shortfall of the area.
292. To understand why the applicant cannot identify specific waste streams to serve the plant it is important to have an understanding of the different characteristics of the waste markets for municipal and commercial and industrial waste streams. For municipal waste it is common practice for local authorities to enter long term contracts (often 20-30 years) which enable investment decisions to be secured on the basis that there is a guaranteed waste feedstock thereby providing a clear understanding of its origins. Within Nottinghamshire there is a long-term waste contract secured to manage its municipal waste within Eastcroft until 2030 and Sheffield/Ferrybridge until 2033.
293. This situation is quite different in terms of the C & I waste sector where shorter term contracts (often extending just a few months) are more typical. It

is also common practice that such contracts can only be secured once a facility is available and 'on-stream' within a competitive waste market. It is therefore understandable that the applicant cannot readily identify the specific origins of the waste feedstock at the planning application stage for a facility which would initially predominantly deal with commercial and industrial waste. To refuse planning permission on this ground would in effect prohibit any merchant facility being developed because all developers would be in the same position as Uniper are with the EMERGE facility meaning that shortfalls in commercial and industrial waste recovery capacities identified in the WCS would never get addressed.

294. It is therefore acknowledged that whilst the processing capacity of the EMERGE facility broadly equates to the size of shortfall in recovery capacity within Nottinghamshire and Nottingham, the facility would process waste from outside the plan area because of wider market influences within the waste industry which ultimately determine where waste is actually processed.
295. Policy WCS12 supports the development of new waste infrastructure which would be likely to treat waste from areas outside Nottinghamshire and Nottingham where it is shown that it makes a significant contribution to the movement of waste up the waste hierarchy (criterion a), or there are no facilities or potential sites in more sustainable locations (criterion b), or there are wider social, economic and environmental benefits to clearly support the proposal (criterion c).
296. Compliance with the policy is demonstrated within the report with it being noted that the facility would assist in diverting waste from landfill disposal and In terms of criterion a, one of the reasons that the UK continues to extensively rely on landfill disposal for waste management is because the UK's availability of residual recovery capacity is significantly less than the amount of residual waste requiring treatment. The EMERGE facility would help address some of this capacity shortfall and in so doing would result in waste being recovered rather than disposed in compliance with WCS Policy WCS12 criterion a.
297. In terms of criterion c, the applicant argues that the EMERGE facility would provide environmental benefits by ensuring waste is managed in a recovery process rather than disposed thus complying with the waste hierarchy, and the facility would manage predominantly local waste. To consider the availability of waste requiring management and the level of treatment capacity in the surrounding area, the applicant has assessed the pattern of waste management within a 2-hour driving radius of the site and also given consideration to the national position. To do this the applicant utilises data produced by a private consultancy firm (Tolvik Consulting Ltd.) to inform their assessment of waste availability and shortfalls in capacity, primarily drawing on three reports produced by Tolvik. These reports have varying levels of public accessibility and has led to criticism from objectors including UKWIN that the information is neither independent or freely available for scrutiny. The Tolvik documents referenced by the applicant including a summary of their conclusions are identified below:

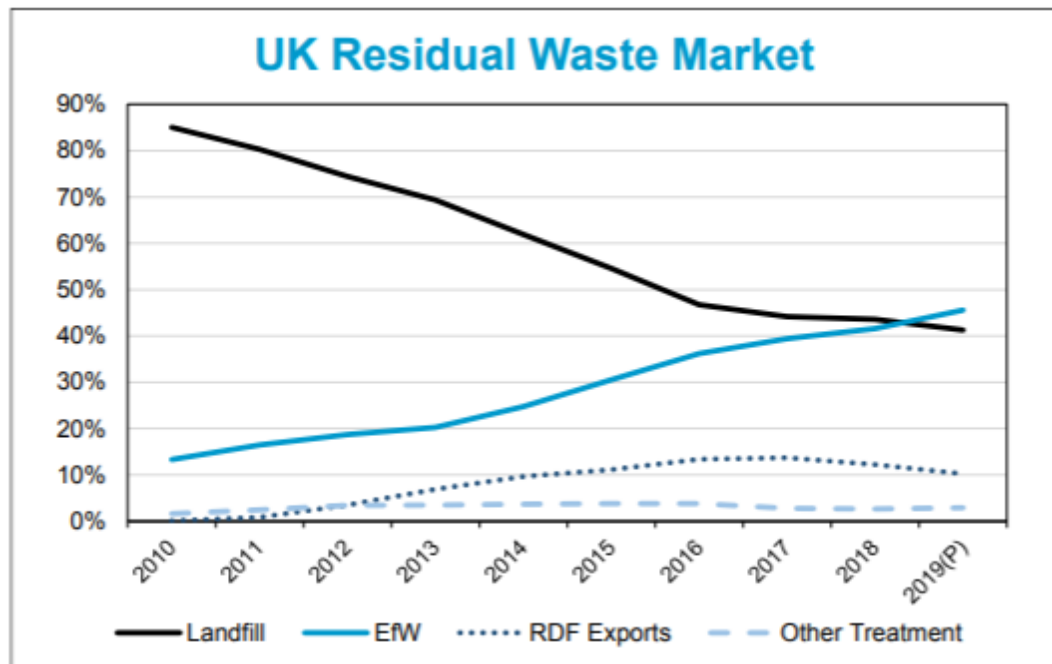
- UK Energy from Waste Statistics 2019: This is a freely available document produced by/available to view on the Tolvik Consultancy website. It is a statistics based document, readily available for public viewing and provides a reliable database to assist with the assessment of the planning application, particularly in respect of the national availability of facilities.
- 'Filling the Gap – The Future for Residual Waste in the UK': February 2019: The document is available on the Tolvik Consultancy website to purchase at a cost of £594 and therefore not openly available for public inspection/scrutiny. The document is referenced by the applicant in their planning submission primarily to demonstrate that there is a national shortfall in residual waste recovery capacity. The applicant's supporting planning statement incorporates a detailed summary of the key findings of this report including the statistical evidence base underpinning the data. Officers are therefore satisfied that the information incorporated in the planning application relating to national waste management capacity is freely available for consultees to inspect and make comments on.
- A Tolvik report commissioned by the developers which provides a financial review of the residual waste market to evaluate the availability of waste using a circa 2-hour drive time catchment area from the Power Station site: This report is private and commercially sensitive and not available for public inspection/scrutiny. The planning supporting statement incorporates numeric data originating from this report but does not include any detailed summary of the key findings of the report or the statistical database that was considered to identify the availability of waste management capacity within a two-hour drive of the site meaning that the regional capacity evidence base could not be scrutinised and robustly relied on within the planning decision. To address this concern the applicant has provided further statistical data as part of their formal Reg. 25 response to provide a more extensive and detailed summary of the key findings and statistical evidence base underpinning the availability of residual waste management at a regional level and provide a greater level of assurance that the evidence base presented by the applicant of a capacity shortfall within a two-hour drive of the site is reliable.

298. In terms of the regional position, the applicant states that they have used a circa 2-hour drive from the application site based on experience of delivery patterns at similar facilities. The boundaries of the 2-hour drive acknowledge the fact that delivery vehicle speeds are on average 62% that of cars. Within this drive time, 28 Local Authorities make up the catchment area for the market review. The report quantifies the level of residual local authority waste and residual commercial and industrial waste produced in the catchment area and compares this to the level of recovery capacity available within the area to calculate that there is a predicted shortfall in recovery capacity in 2035 of 1.17m tonnes which the EMERGE facility would assist in meeting.

299. UKWIN has criticised the methodology used by the applicant to calculate the level of regional demand for additional energy recovery capacity, raising concerns that the applicant's assessment does not correctly identify the alternative capacity availability and omits several incinerators from the calculation. These concerns have been investigated by Officers.
- In terms of operating capacity data, the applicant's data references operational throughput levels, in contrast UKWIN references the upper limit regulated within the permit/planning permission. These regulatory limits set a maximum operating level which cannot be exceeded and in practice facilities operate somewhere below this maximum limit. The use of operational data is therefore considered to be more representative of capacity availability and the use of this data is consistent with paragraph 3 of the National Planning Policy for Waste which encourages the use of operational data when considering the need for new facilities.
 - Examining the operational capacity in greater detail, the most notable difference between the applicant's and UKWIN's figures relate to the capacity data identified for Ferrybridge 1 and 2. UKWIN identify Ferrybridge 1 and 2 have a combined permitted capacity of 1.35 million tonnes per year (there operational capacity is 1.28 million tonnes per year). The applicant's appraisal considers that the location of the Ferrybridge facility on the edge of the two-hour radius from Ratcliffe means that in practice only about 50% of the catchment area would be accessible to Ferrybridge and on this basis consider that 640,000 tonnes of the Ferrybridge capacity would contribute to the regional (2-hour drive) appraisal.
 - In terms of the concerns raised that the applicant's assessment does not include all the operational capacity within a 2-hour journey distance, UKWIN identify eight facilities with a combined capacity of 2,619,300 tonnes per year which they consider have been omitted from the assessment. The location of these 'omitted' facilities have been reviewed against the applicant's identified 2-hour delivery radius for the EMERGE facility which is clearly identified on a plan in their planning submission. None of the operational facilities identified by UKWIN are within this catchment area and therefore the applicant's approach to not include this capacity in their calculation is considered appropriate.
 - UKWIN also make reference to the Newhurst facility near Shepshed which they claim has not been accounted. However, the applicant's appraisal acknowledges that this facility is being developed with a capacity of circa 350,000 tonnes per year and that they this capacity has been taken into account in the applicant's calculation that the capacity gap in the catchment area is forecast to be 1.17 million tonnes by 2035.
300. Modelling waste data inherently is difficult because of the many variables which influence the results. UKWIN's criticism of the accuracy of the

applicant's model and the assumptions it uses in terms of waste management practice, future waste management policy and the availability of facilities within the catchment area are not unjustified. Officers have examined these concerns against the assumptions used by the applicant in their model and conclude that the applicant's model uses a reasonable methodology but acknowledge the variability of the input data. The calculation of the level of waste management capacity and shortfalls within the 2-hour drive radius of the EMERGE are therefore considered appropriate and the overall conclusion reached by the applicant that there is a shortfall of residual waste management capacity in the 2-hour drive catchment area is considered reasonable and justified. The specific size of this shortfall stated at 1.17 million tonnes at 2035 is considered to be overly precise and should be treated with some caution, but this fact should not undermine the more general conclusion reached that there is a shortfall of residual waste management capacity in the 2-hour catchment area which the EMERGE facility would assist in addressing and is a conclusion which is consistent with position relating to shortfalls in residual waste management capacity at a more local Nottinghamshire and Nottingham level as well as the wider national position where there is more certainty regarding the data.

301. In terms of the wider UK position, Tolvik's publicised statistics for UK Energy from Waste show that in December 2019 there were 48 fully operational EfWs with a further 6 accepting waste providing a combined capacity availability of 15.40Mtpa with a further 3.10Mtpa of EfW capacity either in construction or about to commence construction, increasing the total capacity to 18.50Mtpa. In 2019 provisional data suggests that residual waste inputs to EfWs in the UK represented 45.5% of the overall UK residual waste market and for the first time the total tonnage of residual waste sent to EfWs in the UK exceeded the tonnage sent to landfill. The data also identifies that around 10% of the overall UK residual waste was exported abroad in the form of crudely processed refuse derived fuel (RDF). The Government considers that the export of this waste is undesirable, noting that while such exports are permissible, the energy recovered from the waste does not contribute to UK renewable energy targets and is effectively a lost resource to the UK (see table below).



Source: UK Energy from Waste Statistics 2019

302. The Tolvik report 'Filling the Gap – The future of residual waste in the UK' incorporates projections which indicate there is likely to be a capacity gap between the level of residual waste requiring treatment and the availability of UK based EfW facilities of around 7 million tpa between 2025–2035. This capacity gap represents the equivalent of around 20 mid-sized EfW facilities and thus supports the applicant's conclusion that there is a national need to develop additional EfW facilities.
303. The data before the Council indicates that there is likely to be a significant shortfall in the availability of waste treatment facilities to manage residual waste arisings at county, regional and national levels even after acknowledging the variability in precisely quantifying the level of this capacity gap. The additional residual waste management capacity that would be provided by the EMERGE facility would assist in continuing the trend over recent years of replacing dependence on landfill with additional recovery capacity, thus resulting in achieving waste management at a higher level in the waste hierarchy than is currently being achieved.
304. Since the EMERGE facility operates as a recovery facility in the context of the waste hierarchy, any residual waste processed within the facility would be managed at the highest level in the waste hierarchy in the context of this waste stream, enabling energy to be recovered from the residual waste and assist in diverting residual waste from landfill disposal. The recovery process also enables metals to be removed from the process and the incinerator bottom ash to be used as a secondary aggregate in the construction industry. These aspects of the development mean that the EMERGE facility would make a significant contribution to the movement of waste up the waste

hierarchy and therefore ensure compliance with WCS Policy WCS12 criterion a.

305. The applicant's submission does not demonstrate that there are no facilities or potential sites in more sustainable locations in relation to the anticipated source of the identified waste stream, which is required to demonstrate compliance under WCS Policy WCS12 criterion b. However, it should be acknowledged that a failure to demonstrate compliance with criterion b does not mean that the development fails to satisfy the policy tests of WCS12 since the wording of this policy does not require all its criteria to be complied with.
306. WCS Policy WCS12 criterion c requires the demonstration of wider social, economic or environmental sustainability benefits to clearly support the proposal. Since the proposed development would bring about a movement of waste up the waste hierarchy and the generation of low carbon energy, it would provide socio-economic benefits and a level of support under this criterion.
307. The EMERGE facility would operate as a merchant facility accepting waste from a wider regional area, potentially up to a two-hour drive. The evidence in front of the Council demonstrates that there are shortfalls in both local, regional and national residual waste management recovery capacity which the EMERGE facility would assist in reducing and in so doing would reduce the UK's dependence on landfill disposal, thus resulting in a significant contribution to the movement of waste up the waste hierarchy as well as providing a source of low carbon energy and therefore benefitting from policy support from WCS Policy WCS12 criteria a and c.
308. Taking all the evidence before the WPA into account it is considered that the waste management benefits of the scheme are a material consideration of significant importance. The facility will provide additional recovery capacity to address acknowledged shortfalls in management capacity, its processing capacity being broadly equivalent to the shortfall in capacity for dealing with residual waste arisings of the Nottinghamshire and Nottingham area and it would enable this waste to be managed more sustainably at a higher level in the waste hierarchy.
309. However, it is acknowledged that there is a level of uncertainty regarding the exact level of capacity shortfall. If the facility was shown to exceed the residual waste management shortfall of Nottinghamshire and Nottingham, the facility would look to import waste from outside the plan area. There are shortfalls in residual waste management capacity at both national regional and local level as evidenced by the UK's continuing dependence on landfill disposal. The EMERGE facility would assist in the diversion of this waste from landfill disposal, enabling it to be managed at a higher level in the waste hierarchy. The level of weight given to these benefits is considered to be moderate beneficial rather than significant. The level of benefit has been tempered by the fact that the haulage of waste from outside the County area could potentially involve travel distances of up to 2 hour duration, but

acknowledges that this is more desirable than exporting the waste to Europe for treatment.

Assessment of Greenhouse Gas Emissions and Climate Change

310. The NPPF identifies that mitigating and adapting to climate change and moving to a low carbon economy as part of a wider objective to protect the environment is one of the three overarching objectives which contribute towards delivering sustainable development.
311. NPPF Paragraph 148 states that the planning system should support the transition to a low carbon future in a changing climate and should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions; encourage the reuse of existing resources; and support renewable and low carbon energy and associated infrastructure.
312. NPPF Paragraph 151 seeks to increase the use and supply of renewable and low carbon energy and heat, requiring planning authorities to provide a positive strategy for energy from these sources and identify opportunities for development to draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.
313. NPPF Paragraph 154 states that *'when determining planning applications for renewable and low carbon development, local planning authorities should not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and approve the application if its impacts are (or can be made) acceptable'*.
314. The Government's Overarching National Planning Statement for Energy (NPS EN-1) incorporates national policy for delivering energy infrastructure, identifying that renewable energy from the biogenic part of the mixed residual waste is one of a number of technologies that has the greatest potential to increase energy generation from renewable sources. Whilst NPS EN1 is directed at larger nationally significant infrastructure projects, the underlying principles are relevant, and its policy is a material planning consideration. It is acknowledged that NPS EN1 is a few years old, dating from 2011 and this fact potentially tempers some of the weight given to its policies, but it remains the Government's national energy policy (save for coal based projects) and has not been updated to reflect 2019 amendments to the Climate Change Act, nor has it been suspended following the review that will be undertaken by Government as part of the latest Energy White Paper. Paragraph 5.2.2 of NPS EN1 includes provisions which say certain energy projects should not generally be refused solely on carbon grounds where need is established under EN1 for a project, and that reliance can be placed on non-planning policies and regulatory regimes aimed at decarbonising electricity generation when determining planning applications.

315. The Government's DEFRA publication 'Energy from Waste – A guide to the debate' explains that the residual waste feedstock used by incinerators incorporates a mix of different materials including plastics made from oil which are not renewable and other materials such as food, paper and wood that were recently growing, are biodegradable and therefore renewable. Because of the mixed composition of the feedstock, energy from residual waste is considered as a partially renewable energy source commonly referred to as a 'low carbon' energy source.
316. The Development Plan incorporates a series of planning policies consistent with the approach set out within the NPPF, seeking to support the transition to a low carbon future and supporting renewable and low carbon energy. The key policies are summarised below:
- WCS Policy WCS14: Managing Climate Change seeks to ensure all new or extended waste management facilities are located, designed and operated so as to minimise any potential impacts on and increase adaptability to climate change.
 - RCS Part 1 Policy 2: Climate Change states that all development proposals will be expected to mitigate against and adapt to climate change, and to comply with national and local targets on reducing carbon emissions and energy use and requiring development to demonstrate how carbon dioxide emissions have been minimised. Specifically, the policy states that the development of new decentralised, renewable and low-carbon energy schemes appropriate for Rushcliffe will be promoted where these are compatible with environmental, heritage, landscape and other planning considerations and that adjacent new developments will be expected to utilise such energy wherever it is feasible and viable to do so.
 - RLP Part 2, Policy 16: Renewable Energy states that renewable energy scheme will be granted where their environmental impacts are acceptable. Whilst energy from waste is a low carbon and not a renewable energy source, paragraph 5.1 of the supporting text explains that the positive support provided by Policy 16 relates to a wide range of technologies including energy from waste.
317. Nottinghamshire County Council recognises the importance of mitigating against climate change and taking action to move towards carbon neutrality, as reflected through the declaration of a Climate Change Emergency at the Council's Annual General Meeting on 27th May 2021 where it was agreed that the new Transport & Environment Committee would be delegated *'to take the lead in considering, agreeing, and overseeing appropriate measures to achieve this authority's commitment to achieve carbon neutrality in all its activities by 2030. It was further agreed that all other committees of the Council will be expected to ensure that the decisions they take within their remit adhere to this principle, and the relevant actions agreed across all of these committees will be reported to Full Council on a regular basis so that every Member has an ongoing overview of the progress being made.'*

318. Objectors have raised concerns that the electricity derived from the EMERGE facility is not low carbon, identifying that the carbon emissions of electricity produced by waste incinerators are among the highest on the grid when a comparison is made between the level of carbon emissions released compared to the relative electrical energy output. Data within the environmental statement identifies that the electricity generated within the EMERGE facility would release 560gCO₂/KWh(e). This compares to a UK average for electricity generated within the grid of 256gCO₂/KW(e). However, this simple comparison between energy flows into and carbon emissions out of the process fails to acknowledge the fact that energy from waste bridges two sectors of the economy with its primary function being to manage residual waste arisings and the energy generation being a secondary but increasingly important function. Paragraph 37 of the DEFRA publication 'Energy from Waste: A guide to the debate' acknowledges that when waste is disposed it will result in the release of carbon into the atmosphere, but the level of carbon emissions from managing the same quantity of waste will be different depending on the treatment process used. Residual waste managed within an energy recovery facility diverts waste from other management options. Currently within the UK the options for managing unsegregated residual waste is principally a choice between landfill disposal or energy recovery. Therefore, when calculating the climate change effects of energy recovery facilities, it is appropriate to compare the level of carbon emissions between energy recovery and landfill disposal rather than making a direct comparison with alternative electrical generating installations, since this is the main function of the plant. This approach is consistent with paragraphs 35-46 of DEFRA's 'Energy from Waste: A Guide to the Debate'. Paragraph 46 of this guide confirms that energy from waste currently provides a better environmental solution than landfill for the management of residual waste, in most scenarios.
319. The DEFRA publication 'Energy from Waste: A Guide to the Debate' clearly identifies that energy derived from residual waste is defined as a low carbon energy source and partially renewable. The policy message within the NPPF, RCS Policy 2 and RLP Policy 16 is clear insofar that low carbon energy developments should be approved if the environmental impacts are (or can be made) acceptable.
320. The DEFRA guide confirms that the Government sees a long-term role for energy from waste both as a waste management tool and as a source of energy but expresses some caution within Chapter 5 of the guide that the benefits of energy from waste as a method of reducing carbon emissions associated with waste management may be eroded over the longer term. The DEFRA guide explains that energy from waste needs to operate at a level of efficiency where it can be defined as recovery not disposal in the context of the waste hierarchy. Achieving recovery status for waste incineration facilities is measured by calculating the efficiency of the process using a formula known as the R1 calculation derived from Annex II of the European Directive 2008/98/EC on waste. The applicant's R1 calculation indicates that the design of the EMERGE facility is comfortably capable of

meeting the R1 threshold to enable the planning application to be assessed as a recovery operation and thus comply with the first principle of energy from waste policy.

321. The second principle concerning the long-term future of energy from waste policy is about ensuring that energy recovery is the best solution for the residual waste going to it, and then where this is the case that the most is made of the resource with one of the key components of the environmental impact being the relative greenhouse gas emissions. The guide acknowledges that long term changes in the energy mix, particularly the decarbonisation of the UK's electricity generation system, has significant consequences for the relative merits of carbon emissions when comparing energy recovery with landfill, identifying a potential balance point where as energy decarbonises, increasing efficiency alone is no longer sufficient to ensure energy from waste is better than landfill in carbon terms, with the biogenic content of the waste feedstock becoming critical. DEFRA acknowledges that energy outputs associated with heating are expected to decarbonise much more slowly than electricity and the delivery of heat from energy from waste can be done at much higher efficiencies than electricity only. This means that plants which operate in combined heat and power (CHP) mode will be able to continue to be superior to landfill, with longer plant lifetimes. The DEFRA Energy from Waste Guide (paragraph 258) therefore identifies that a key consideration with identifying sites for the development of new energy from waste plants should be that they are close to heat users.
322. Local waste policy relating to the development of new energy recovery facilities is incorporated within WCS Policy WCS3. This policy imposes a less demanding test than the DEFRA guide insofar that it requires facilities to produce heat and/or generate power which can be used locally or fed into the national grid. The EMERGE facility would assist in diverting waste from landfill and generate electricity to be fed into the national grid and therefore is compliant with WCS Policy WCS3.
323. The EMERGE facility includes the potential to capture heat but does not incorporate specific proposals of how the heat would be distributed nor does it identify any confirmation that customers would take up options to be supplied with heat.
324. As part of the Environmental Statement the applicant has reviewed the potential to develop a local heat network fed by the EMERGE facility. The applicant has examined a 10km radius of the power station site. Within this area seven potential large industrial loads have been identified but the waterways and associated floodplains of the River Trent and River Soar, the railway line, and the A453 would complicate the export of heat from the power station site. A more focussed target area extending 5 km from the Power Station is a mostly rural area, comprising small villages and associated amenities and provides no current opportunity for a heat load to be taken, particularly since the retrofitting of a district heating systems is likely

to require digging up the streets which is expensive and only economically viable for users with a high demand.

325. A more realistic geographical scope of a CHP scheme is considered to be available within the boundary of the Power Station site, land to the south of the power station, and development land on the edge of Clifton known as Fairham Pastures.
326. The redevelopment of the power station and the land to its south neither has planning permission, a development plan allocation or a committed developer and therefore these proposals must be considered as speculative or emergent and cannot be viewed as a firm commitment, thus limiting the weight that can be given to any potential benefits they provide in this decision. Similarly, although the East Midlands Development Corporation objective is to maximise the development potential of land around the proposed HS2 station at Toton, East Midlands Airport and Ratcliffe-on-Soar power station site following its closure in 2025, the arrangements for a Development Corporation are at the present time still emergent and therefore only limited weight can be given to the development potential that may come from these proposals.
327. The land along the A453 corridor towards Nottingham, on the edge of Clifton (known as Fairham Pastures) is being developed with 3,000 houses and 20 hectares of employment land and has been identified by the applicant as having potential for taking heat load and the heat demand is anticipated to be approximately 3.5 MW. The construction programme for this development is anticipated to be undertaken to coincide with the EMERGE facility becoming operational and therefore overcomes many of the issues and costs associated with retro-fitting a network. The applicant confirms they are seeking opportunities for engagement with the developers to explore the potential for heat provision from the EMERGE facility, but no agreements have yet been reached with heat customers since without the necessary planning consent and environmental permit, heat users remain unable to take commercial contracts about the availability of heat and enter formal commercial contracts. This position is quite common with energy from waste developments and is considered to realistically reflect commercial reality.
328. The EMERGE facility is not anticipated to have a market to export residual heat at its day of commissioning and therefore would not benefit from the potential increased efficiency and comparative carbon savings this provides. The applicant has shown that there is some potential for the EMERGE facility to market its heat through the wider development aspirations within the power station site and the Fairham Pastures urban extension in the medium to longer term, but these heat markets are dependent on subsequent development taking place, much of which does not currently have planning permission and no firm commitment that the development would utilise heat originating from the EMERGE facility.
329. Objectors have raised concerns about the ability to supply heat to new houses in the longer term given that the operational life of the EMERGE

facility might be shorter than the design life of the residential properties, questioning what would happen to the heating demand of these houses in this scenario. Whilst acknowledging the concerns that have been stated, Government policy is very clear that heat networks should be developed around energy from waste facilities and any decision to not actively promote the development of a heat network because of the concerns raised would be contrary to these policy aims. The EMERGE facility is a permanent development with a design life of approximately 30 years although in reality many elements would last beyond this period. To actively not promote the development of a heat network would be a lost opportunity in terms of the use of a low carbon energy source. In the event of the closure of the EMERGE, a district heating system can be powered by a variety of energy sources, however the EMERGE is a permanent facility and therefore the arrangements for alternative heat generating sources in the event of the closure of the facility many years in the future falls outside of the scope of matters requiring assessment at this time.

330. The electrical energy generated from the process is low carbon. Policies within the NPPF and the Development Plan seek to increase the supply and use of low carbon energy:

- NPPF paragraph 154 states that when determining planning applications for renewable and low carbon development, local planning authorities should approve the application if its impacts are (or can be made) acceptable.
- RCS Policy 2: Climate Change seeks to maximise the use of renewable and low carbon energy.
- RLP Policy 16: Renewable Energy states that proposals for renewable energy (which the supporting text confirms includes energy from waste) will be granted planning permission where the environmental impacts are acceptable.

It is therefore clear that low carbon energy derived from energy recovery of residual waste is strongly supported by national planning policy and the development plan and this policy support is given significant weight in the planning balance. However, the facility is unlikely to beneficially dispatch its residual heat energy at the date of commissioning and this reduces the maximum theoretical climate change benefit of the facility. Acknowledging the importance given to the development of heating networks served by energy from waste in Government policy, the level of benefit given to the low carbon energy produced by the facility at the point of commissioning is tempered in the planning balance and reduces the significance of the beneficial weighting, particularly having regard to the longer term life of the project and the potential for benefits to be eroded over time without a heat user. The development will be CHP ready and the potential regeneration and housing development in the area surrounding the EMERGE facility may provide opportunities for developing a heat network in the medium to longer term, but the lack of any firm commitments to utilise the heat means that this is given limited weight in the planning assessment.

331. To ensure that potential for heat recovery is not lost it is proposed to regulate through planning condition an obligation for the developer to maintain an ongoing commitment to develop a heat network throughout the operation life of the EMERGE facility. The scheme would require the operator to safeguard land within the planning application site to enable a supply of heat to be installed to the boundary of the site and carry out a review of the potential to utilise the residual heat from the process prior to the commissioning of the plant and thereafter maintain an ongoing obligation to carry out a rolling three-year review of potential users of heat throughout the operational life of the site and take all reasonable endeavours to commission all viable options.
332. The applicant's environmental statement incorporates an assessment of the level of greenhouse gas emissions resulting from the processing of waste within the EMERGE facility in relation to the alternative option of disposing the same quantity of waste to landfill. The assessment incorporates a calculation of the associated transport of waste and consumables to the site and the removal of incinerator bottom ash and air pollution control residues from the site.
333. The applicant's calculation identifies that the processing of 472,100 tonnes per year of residual waste within the EMERGE facility would release a net total equivalent of 453,185 tonnes of CO₂ per year. This clearly is a high level of greenhouse gas emissions that would have a negative impact in terms of climate change. However, the residual waste stream incorporates around 60% biogenic waste originating from material within the waste stream that has come from biological sources and was recently growing in the last hundred or so years such as food, paper, garden waste, wood, and not 'fossil' material which has come from sources such as coal, oil and natural gas which have been locked underground for millions of years such as plastics made from oil. Biogenic waste is considered as climate change neutral for the purposes of assessing climate change impacts. The level of non-biogenic (fossil) CO₂ emissions from the EMERGE facility and its ancillary functions is calculated to be 191,223tpa.
334. The electricity generated by the EMERGE facility and sent to the grid would contribute towards the overall electricity generating capacity of the UK as baseload energy and enable the national grid to switch from other sources of baseload electricity generated elsewhere in the grid system. The DEFRA Energy from Waste guide confirms that when calculating the net level of carbon emissions of an energy recovery facility it is appropriate to deduct from the gross carbon output the carbon emissions that are displaced by producing the equivalent energy output at an alternative generating facility. The guide confirms that *"A gas fired power station (Combined Cycle Gas Turbine – CCGT) is a reasonable comparator as this is the most likely technology to be used if you wanted to build a new power station today"* to produce baseload electricity (footnote 29 on page 21). The generation of 43.4MW of electricity within a gas fired power station would result in the emission of 119,443 tonnes per annum of CO₂.

335. The net level of non-biogenic emissions from the EMERGE facility calculated in accordance with industry practice recommended by DEFRA is calculated to be 76,213 tonnes of CO₂ per year. This figure is calculated by totalising the non-biogenic direct emissions from the operation of the plant and the transport emissions (191,223t + 4,433t = 195,656t CO₂) and then subtracting the CO₂ off-set which is delivered by reducing the CO₂ emissions that would result from the production of 43.4MW of electricity in a gas fired power station (119,443 tonnes per annum of CO₂).
336. The applicant's calculation of the level of CO₂ emissions resulting from the management of the equivalent quantity of waste in a landfill facility identifies that the total level of emissions from the landfill would be 182,291 tonnes of CO₂ per year (after adjustments for electricity off-set and transport releases). The additional carbon load of a landfill is primarily as a result of landfill gas which is generated when biogenic waste decomposes in a landfill. Landfill gas incorporates methane and carbon dioxide. Although much of the methane is recovered and combusted in a gas engine to produce electricity, significant quantities of the methane gas are released to the atmosphere. Methane is 25 times more damaging to the atmosphere in terms of global warming than CO₂ and this is reflected in the carbon comparative. The energy recovery from a landfill is also much lower and therefore energy off-set would be much lower than the EMERGE at 29,904 tonnes of CO₂ per year.
337. In comparative terms, the applicant's calculation shows that the use of the EMERGE facility would result in a net reduction of 106,079 tonnes of CO₂ per year compared to managing the same quantity and composition of waste within a landfill. These are benefits that attract significant weight in the planning balance.
338. Concerns have been raised by UKWIN that changes to the composition of the waste feedstock likely to occur as a result of anticipated legislation changes affecting the production and collection arrangements of waste materials could negate the net carbon savings which would be derived from using the EMERGE facility in comparison to disposing the same quantity of waste within a landfill facility. To investigate these concerns the applicant has assessed a number of scenarios relating to different compositions of waste. These results are summarised in points a-e below. Whilst acknowledging the technical complexity of these matters, the important issue to take from this assessment in the context of making this decision is that the level of carbon releases from the EMERGE facility and its comparative performance to landfill disposal would fluctuate depending on the composition of the waste feedstock used, but the EMERGE facility would continue to have a net benefit in terms of its level of carbon emissions when compared to disposing the same quantity of waste in landfill in almost all scenarios. The matters are considered in greater detail in the subsequent text of the report.
- a. The biogenic carbon content is composed of subfractions which are assumed to be 100% biogenic (comprising paper, card, wood, garden

waste, food waste, organic pet bedding/litter and other organics) or 50% biogenic (comprising textiles, disposable nappies, other hygiene products, shoes, carpet, underlay, furniture, other combustibles and fines). Waste with higher calorific values tends to be dominated by plastics and wood, whereas the organic subfractions become more significant at lower calorific values. If the residual waste delivered to the site had a lower net calorific value, due to changes in its composition from increased segregation of plastics, the calorific content of the residual waste stream would reduce from 10MJ/Kg to 9MJ/kg. The applicant calculates the level of CO₂ benefit derived from using the EMERGE facility in comparison to landfill disposal would be greater at 124,845 tonnes per year. This is because plastics are manufactured from non-biogenic carbon (oils) and this non-biogenic carbon content is released in the incineration process, whereas when plastic is disposed in landfill it does not decompose and release its carbon.

- b. If grid average CO₂e displacement figures for electricity generation (instead of CO₂ releases from gas generation) were used, the net benefit of using the EMERGE facility in comparison to landfill disposal is calculated to be 69,904 tonnes CO₂ equivalent per year.
- c. If it was assumed there is no carbon benefit from the displacement of grid generation, as would be the case if power generation has been completely decarbonised. It is calculated that the net benefit would be 16,540 tonnes CO₂ equivalent per year.
- d. The methane collection efficiency for large, modern landfill sites used by the applicant in their assessment is estimated to be 68% which compares to a collection efficiency for the UK as a whole estimated to be 52%. There have been suggestions in some guidance that a methane collection figure of 75% should be used. If this is used it is calculated the development would provide a net benefit of 59,341 tonnes CO₂ equivalent per year.
- e. Under landfill conditions a proportion of the biogenic carbon will not decompose and therefore this carbon would not be released to the atmosphere as would be the case if the waste is combusted in the EMERGE facility. Since CO₂ associated with biogenic emissions is considered carbon neutral, if this fraction is considered to be permanently sequestered (captured and stored) in landfill, it could reasonably be considered to constitute a net carbon benefit or carbon store. The applicant's assessment does not treat this stored carbon as a net benefit on the basis that a conservative assumption has been made that only 50% of biogenic carbon would decompose to methane, but considers permanent sequestration as a sensitivity. The applicant's assessment shows that the EMERGE facility would actually have a worse impact in terms of climate change than landfill, the disbenefit relative to landfill being around 29,718 tonnes CO₂ per year if 50% of biogenic carbon is considered to be permanently sequestered. Reducing the latter assumption to 45% shows the EMERGE facility as having a net benefit of

1,790 tonnes CO₂ per year. These issues are considered in more detail in the section below.

339. Legislative changes proposed within the Environment Bill currently passing through Parliament aim to decarbonise waste through a combination of reducing the biogenic carbon content by removing food waste, principally by requiring councils to operate a weekly separate food waste collection and reducing the plastics content through the phasing out of non-recyclable plastic use in the wider economy and thus change the composition of residual waste. Objectors have raised concerns that these changes in the composition of residual waste will erode any benefit of energy from waste compared to landfill disposal in carbon terms and in particular have identified that one of the modelled scenarios which identifies low levels of food waste but plastics remaining in the residual waste stream indicates that landfill would actually sequester carbon, effectively resulting in landfill disposal having 'negative emissions' in terms of their CO₂ releases and the EMERGE facility would result in higher levels of equivalent CO₂ releases than landfill.
340. The applicant has modelled the effects associated with the decarbonisation of the waste stream resulting from reduced food and plastic content, calculating the effects of a 25%, 50%, 75% and a 100% reduction of these materials from the waste stream and comparing the level of carbon releases of processing these waste compositions in the EMERGE facility with the levels of carbon release from the current waste composition. This shows that the net benefit of the EMERGE facility relative to disposal by landfill increases as the proportion of plastics and food are removed. Relative to the expected net benefit predicted to be 106kt CO₂e based on existing waste composition, the 50% and 100% removal cases increase the net benefits to 151 kt CO₂e and 217 kt CO₂e per year, respectively. A reduction in food waste entering landfills would reduce the level of methane emissions generated by landfill and consequently shift the balance away from energy recovery. By contrast, if plastics are reduced from residual waste this would reduce the level of non-biogenic carbon emissions produced by energy recovery facilities in comparison to landfill because the plastic when disposed in landfill does not decompose and release its carbon content, whereas the incineration process readily releases carbon stored in plastics.
341. There is considerable uncertainty regarding the level of improvements that will be made to recycling performance and waste segregation and how this will affect the biogenic level of residual waste. However, it is acknowledged that if food waste was removed from the waste stream and plastics were not, then there could be a scenario whereby using the EMERGE facility would actually be worse than using a landfill in terms of the level of carbon emissions. The changes proposed within the Environment Bill identify actions on both food waste and plastic reductions and therefore this scenario is considered unlikely to occur.
342. DEFRA identify in their Energy from Waste guide that there are potential balance points in residual waste composition beyond which energy from waste could perform worse than landfill in carbon terms, identifying one of the

main determinants in the primacy of energy from waste over landfill as the biogenic content of the waste feedstock.

343. There are many variable factors to be considered and balanced when modelling the carbon emissions of landfill and energy recovery including the changing biogenic content of residual waste over time; how the biogenic CO₂ is counted; the fact that not all the biogenic material breaks down in landfill; the level of landfill gas capture and allowance for the fact that landfill gas is released over many years; the impact of recycling metals; and the impact of pre-treatments on stabilising waste. Deciding how to employ the applicant's carbon assessment in determining this planning application should properly take into account the fact that the influences which determine the actual level of carbon emissions are very variable and complicated. The applicant's sensitivity analysis indicates that variations in the parameters used in the assessment can result in large differences in the outcome, but in almost all scenarios energy from waste results in lower comparative carbon emissions than disposing of the equivalent amount of waste in a landfill facility.
344. The composition of the waste stream that would be managed within the EMERGE facility is outside of the control of the operator. The composition of residual waste is likely to change over time as changes in legislation, economics and environmental controls are introduced with every possibility that the level of biogenic content in the waste stream will reduce as methods are devised and implemented in future to separate and recycle waste with biogenic content that is currently difficult or uneconomic to do at present. This introduces some doubt over the longer-term climate change benefits that the EMERGE facility may provide over the lifetime of the facility when compared to landfill.
345. Overall it is concluded that the applicant's assessment is based on realistic assumptions and demonstrates that the operation of the EMERGE facility would provide significant reductions in the level of carbon emissions when compared to managing the same level of waste within a landfill facility. The electrical energy derived from the process is low carbon and the policies within the NPPF, RCS Policy 2 and RLP Policy 16 are clear insofar that low carbon energy developments should be approved where the environmental impacts are (or can be made) acceptable. Government policy is supportive of the development of new energy from waste infrastructure and require decision makers to give these benefits significant weight in their decisions. However, the uncertainties regarding changes to waste composition affecting the carbon benefits of the EMERGE facility in the medium to longer term mean that the level of benefit over the life of the development could reduce in terms of greenhouse gas emissions and climate change benefits which in turn tempers the significance of the beneficial weight in the planning balance to moderate benefit in the longer term.
346. The future potential for carbon capture technology is examined below in the context of Net Zero. As the proposed development is below 300MW there is no policy or regulatory requirement for the project to be "Carbon Capture Ready", but the applicant has nevertheless considered the potential future

possibility of this. Should carbon capture and storage be developed and successfully installed in the future in response to changing regulatory requirements (including stricter future emissions standards under the environmental permit regime) then this would ensure longer term significant benefits are provided by the development. If this was to occur the level of benefit would be assessed as significant in the longer term. However, given such technology does not form part of this application and, for reasons noted below, it is considered inappropriate to condition any such requirement, the weight given to carbon benefits over the longer term has been reduced as detailed above and below.

347. As previously noted, the facility is unlikely to beneficially dispatch its residual heat energy at the date of commissioning and this reduces the maximum theoretical climate change benefit of the facility. Acknowledging the importance given to the development of heating networks served by energy from waste in Government policy, the level of benefit given to the low carbon energy produced by the facility at the point of commissioning is tempered in the planning balance and reduces the significance of the beneficial weighting, particularly having regard to the longer term life of the project and the potential for benefits to be eroded over time without a heat user. The development will be CHP ready and the potential regeneration and housing development in the area surrounding the EMERGE facility may provide opportunities for developing a heat network in the medium to longer term, but the lack of any firm commitments to utilise the heat means that this is given limited weight in the planning assessment.
348. The need to take action on climate change and to reduce carbon emissions is a material consideration in the determination of this planning application and is a matter which has been afforded additional weight at a local level through the council's recent declaration of a climate emergency.
349. The terms of the Council's declaration make clear that measures will need to be adopted in order to give effect to the Council's stated intention to achieve carbon neutrality in all its activities by 2030. These measures have not been developed given the short time since the declaration was made but the declaration has reinforced the importance which the Council attaches to mitigating climate change and reducing carbon emissions.
350. Planning law requires this planning application to be determined in accordance with the Development Plan unless there are material considerations which indicate otherwise. The planning policies within the Development Plan in relation to the climate change have been considered to inform the assessment of the planning application.
351. The conclusion reached in terms of compliance with Development Plan policies relating to climate change is that they are supportive of the development, notably RCS Policy 2: Climate Change seeks to maximise the use of renewable and low carbon energy, RLP Policy 16, Renewable Energy requires renewable energy (including energy from waste) to be granted planning permission where the environmental impacts are acceptable and

WCS Policy 14:Managing Climate Change which requires all new waste management facilities to minimise any potential impacts on, and increase adaptability to, climate change. Wider material consideration are also supportive of a grant of planning permission, most notably NPPF paragraph 145 which requires planning applications for low carbon energy to be granted planning permission where environmental impacts are or can be made acceptable and the consistency of the development with DEFRA's Energy from Waste Guide.

352. The predicted level of non-biogenic (fossil) emissions at the day commissioning (circa 2024) would be 191,223tpa. Whilst it is anticipated that the operation of the facility would decarbonise throughout its operation life consistent with the UK's transition to a low carbon economy (as set out in the following section of the report), the level of emissions from the operation of the facility is unlikely to be consistent with the underpinning objective of the Council's Climate Emergency to achieve carbon neutrality by 2030.
353. If a decision was taken to refuse planning permission for the EMERGE facility because of concerns that the level of climate change emissions may not be consistent with the objective of the Council's Climate Change Emergency to achieve carbon neutrality by 2030, the implication of such a decision would be that the County would continue to have a shortfall of recovery processing capacity contrary to the objectives of WCS strategic objective 6, residual waste would continue to be exported out of the county for processing and this would perpetuate national shortfalls of recovery capacity which mean the UK would still be reliant on landfill and waste exports to manage residual waste.
354. The use of landfills for waste disposal is at the bottom of the waste hierarchy largely because this waste management route has the greatest climate change impact largely because the decomposition of waste within landfill sites generates methane which is 25 times more damaging than CO₂ in terms of global warming. Whilst much of this methane is recovered and combusted to produce electricity, significant quantities are released into the atmosphere. Methane production would not be an issue with the proposed EMERGE facility, lending support to the proposed development in terms of climate change impacts.
355. The applicant's calculation shows that the use of the EMERGE facility would result in a net reduction of 106,079 tonnes of CO₂ per year compared to disposing of the same quantity and composition of waste within a landfill.
356. It is therefore concluded that a refusal of planning permission for the EMERGE would be likely to result in higher levels of climate change emissions contrary to the wider objectives of UK policy which support a transition to a low carbon future.
357. The following section of this report demonstrates that the level of carbon emissions from the facility is anticipated to reduce throughout the operational life of the plant towards meeting a national target of net zero CO₂ emissions by 2050.

Net Zero by 2050

358. The Climate Change Act 2008 placed a duty on the then Secretary of State for Energy and Climate Change (now part of the Department for Business, Energy and Industrial Strategy (BEIS)) to ensure the net carbon account for the year 2050 is at least 80% lower than the 1990 baseline level. In June 2019, secondary legislation in the form of The Climate Change Act 2008 (2050 Target Amendment) Order 2019 was passed that extended that target to “at least 100%” by 2050.
359. Under the powers invested by Part 2 of the 2008 Act, the Committee on Climate Change has been established as a non-departmental public body to advise the Government and recommend strategy to deliver net zero by 2050. The Act includes provision for the target in the future to be amended following advice from the Committee on Climate Change and for carbon budgets to be set for the UK for successive 5-year periods until 2050. In December 2020, the Government announced the ambitious target to reduce the UK’s emissions by at least 68% by 2030, compared to 1990 levels.
360. The Committee on Climate Change report ‘Net Zero: The UK’s contribution to stopping global warming’ was published in May 2019 and identifies a series of potential pathways to deliver the 2050 Net Zero target across a range of sectors in the economy. Specifically, in respect to waste management, the Committee acknowledges that the sector has seen a 69% reduction in greenhouse gas emissions since 1990, noting that this has been achieved primarily as a result of reductions in the amount of biodegradable waste sent to landfill and an increase in methane capture at landfill sites. The Committee identifies that achieving Net Zero within the waste sector is most likely to be achieved by reducing, reusing and recycling waste, diverting biodegradable waste from landfill and capturing methane from landfill and waste water. The technical report which supports this report identifies that additional private sector investment will be required in alternative waste disposal facilities including anaerobic digestion, mechanical biological treatment and incineration to deal with waste diverted from landfill to deliver very deep reductions in emissions, identifying the risk of offshoring (UK exports) of waste if this investment does not happen.
361. The Committee on Climate Change has subsequently produced a progress report in June 2020 to consider the progress the UK has made in reducing UK emissions over the past year and identify recommendations to support the transition to a Net-Zero economy across each Government department. Specific recommendations and actions for the waste industry are made on Pages 183 and 184, where the Committee states:

‘Achieving significant emission reductions in the waste sector requires a step-change towards a circular economy, moving away from landfill and incineration (and the associated methane and fossil CO₂ emissions), and towards a reduction in waste arisings and collection of separated valuable resources for re-use and recycling’.

362. The report incorporates a number of specific recommendations to achieve this objective, as set out below:

- Moving towards a more circular economy through a transition to universal collection of separated food waste, garden wastes and other recycling across England. This is planned in the Environment Bill and should be significantly accelerated and rolled out over 2022-2024 (instead of over 2023-2035), so that all regions of the UK can legislate this year to ban both municipal and non-municipal biodegradable wastes from landfill by 2025.
- Local authorities and private waste management firms need to urgently invest in collection infrastructure and new recycling, composting and anaerobic digestion facilities. The report identifies that there must be sufficient treatment capacity made available before the landfill ban for biodegradable wastes comes into force, so that increases in incineration or exports are avoided.
- Achieving a 70% recycling rate at the latest by 2030 in England (with this target to be included in the Environment Bill). The committee identifies that this will be key to phasing out waste exports and limiting fossil emissions from energy from waste plants. Defra should also plan how waste reduction and higher recycling rates will impact the utilisation of (and need for further) energy from waste plants.
- When regional CO₂ infrastructure becomes available (there are currently no operational facilities in the UK), operational plants above a certain scale should be incentivised or required to retrofit CO₂ capture. New plants (and plant expansions) above a certain scale should only be constructed in areas confirmed to soon have CO₂ infrastructure available and should be built carbon capture and storage ready or with carbon capture and storage. These retrofit dates and capacity thresholds should be set as part of the UK's new Bioenergy Strategy and aligned with carbon capture and storage infrastructure plans.
- Local councils should be carefully considering the fossil emissions from waste to energy plants, and how these plants will retrofit carbon capture and storage in the future, plus the impact of waste reductions and improved recycling.

363. The Climate Change Committee's most recent publication dated 9th December 2020 provides a sixth carbon budget for the waste sector, providing recommendations for the reduction of carbon emissions across all sectors of the economy for the period 2033-2037 as part of a pathway to Net Zero by 2050. It recommends a series of specific policy recommendations for Energy from Waste as set out below:

- Examine the impact of waste reduction and recycling targets on the utilisation of (and need for further) energy from waste plants. Issue guidance notes to align local authority waste contracts and planning policy to these targets.

- New waste conversion plants (including incineration, gasification and pyrolysis facilities) must be built with carbon capture and storage (CCS) or 'CCS ready'.
- Existing plants should start retrofitting CCS from the late 2020s onwards, with 2050 a backstop date for full CCS coverage. This will require either use of greenhouse gas thresholds for generated power and heat (could be set as part of the UK's new Bioenergy Strategy), access to CCS incentives to lower the costs of capture (particularly for smaller facilities further from CCS clusters), and/or carbon taxation (either taxes or inclusion in a UK ETS). Regional retrofit timings should be aligned with BEIS's CCS infrastructure plans.

364. Whilst there is a legal duty on the Secretary of State through the Climate Change Act to ensure compliance with net zero by 2050, the Act does not legislate the strategy to achieve this target. The recommendations of the Climate Change Committee will inform future Government climate change and energy policy and are relevant in terms of the evidence base and potential future direction of policy and weight that is given to this, but it cannot be assumed that the Committee's recommendations will be enshrined in law or future energy and waste policy and therefore only limited weight is given to the specific recommendations of the report to reflect its status. However, as noted elsewhere within this report the overall weight attached to the climate change benefits of the proposed development has been reduced in view of the potential for these to reduce over the life of the development without carbon capture technology being installed, having regard to relevant policy and guidance including the Climate Change Committee recommendations.

365. The applicant's environmental statement acknowledges that the EMERGE facility would need to reduce its carbon intensity over its operational life. To demonstrate how the EMERGE facility can meet more stringent emission standards the applicant identifies a road-map to support its transition to the Government's 2050 Net Zero target and show how the facility would contribute to a reduction in carbon emissions associated with waste management on its day of opening and progressively reduce these emissions up to 2050. The road map identifies a mix of the technologies that the applicant is exploring across its business with full decarbonisation of the EMERGE Centre likely to be achieved using one of, or a combination of, the three longer term measures.

Day 1 of Operations (2025)

- EMERGE Centre will operate with R1 compliance, reducing greenhouse gas emissions by diverting waste from landfill and export abroad; and
- EMERGE Centre designed to allow fuel flexibility should the nature of the incoming waste change over time and recycling levels increase.
- EMERGE Centre will generate low carbon electricity for export to the grid.

Short Term (2025–2035)

- EMERGE Centre designed to be 'CHP ready' for connection to a district heating scheme, with industrial users or manufacturers to use lower carbon energy and heat generated by the facility;
- Changes to the composition of the fuel mix to reduce the non-biogenic carbon contained in the incoming waste stream driven by Government policy on recycling; and
- Potential co-location of a facility to recycle/reuse products extracted from the incoming waste stream (circular economy) reducing the non-biogenic content of the fuel mix and displacing CO₂ emissions associated with the production of products or feedstocks which the extracted products replace.

Longer Term (2030–2050)

- Change in fuel stock to 100% biomass waste (e.g. agricultural and construction industry wastes);
- Carbon Capture and Use (and potentially storage); and/or
- Bilateral or energy recovery sector agreements to offset overall CO₂ emissions by implementing Bioenergy with Carbon Capture and Storage.

366. In terms of the waste fuel, the applicant acknowledges the composition of the residual waste delivered to the site is outside their control but identify that regulation and enforcement within the wider waste management sector will deliver changes to the composition of residual waste. These controls include a mandatory ban on biodegradable waste from key waste streams going to landfill by 2025, the introduction of separate food waste collection by 2023, and supporting measures to increase recycling rates. The applicant's modelling of carbon emissions confirms that the removal of 100% of food and plastics from the incoming waste streams would deliver reductions in the release of non-biogenic CO₂, reducing the level of CO₂ emissions from 191,223 CO₂et/y to 129,739CO₂et/y and reducing the carbon intensity of the electricity produced from 559 gCO₂/kWh to 379 gCO₂/kWh. Changes to waste collection arrangements which will influence the composition of residual waste are currently passing through Parliament as part of the Environment Bill and if these are brought into law they would have the effect of assisting in decarbonising the EMERGE facility.
367. Transport emissions associated with the operation of the EMERGE facility are calculated to contribute up to 5 ktCO₂e per year. There will be a need to reduce these emissions to achieve net zero by 2050. The reduction of emissions in the transport sector is primarily being driven at a national level through wider Government policy and outside the scope of Uniper's influence.
368. Uniper confirm that they will retain the existing rail delivery infrastructure within the wider Ratcliffe-on-Soar Power Station site to allow potential for future delivery of waste by rail should this option become available. The UK rail sector has an ongoing programme of electrification which has potential to further reduce the transport related carbon footprint of the facility, if delivery of

waste by rail can be used in the future. The future role that the railhead in the potential reduction of transport related carbon emissions is considered beneficial albeit these benefits have to be considered in the context that the initial projections for waste imports anticipate all the waste will be delivered by road. Given the potential benefits which could result from a reduction in transport related carbon emissions if delivery of waste by rail were to become an option in the future, it is recommended that the retention of this facility during the design life of the EMERGE facility is regulated within this planning decision through the Section 106 legal agreement to ensure the potential for these benefits are not lost in the future.

369. Carbon capture readiness is currently only mandated in policy and regulations for generating stations above 300MW. The design of the EMERGE facility does not incorporate any facilities for the capture and storage of carbon releases from the process emissions, but the environmental statement gives consideration to the potential for these to be retro-fitted in future years, identifying that the collection of CO₂ following its treatment from the flue stack is the least intrusive to the host process and the most viable retrofit option. The applicant acknowledges that the provision of carbon capture is complex and would add significantly to the overall development costs, but the process offers potential to deliver negative carbon emissions from energy recovery plants by the removal and storage of short cycle biogenic carbon. The applicant considers Government policy will be required to provide the supporting infrastructure and investment to allow industry wide implementation of carbon capture.
370. It is clear that carbon emission standards will become more stringent towards 2050. Emission standards are currently controlled through the environmental permit regime and the development will require an environmental permit in order to operate. Any stricter future emissions standards will be controlled through pollution controls and separate regulations to the planning system across the UK. The energy from waste sector will need to adapt and modify to ensure continuing compliance with these tighter emission standards. Reaching net zero carbon emissions will not be achieved overnight. To impose a requirement on the applicant for the EMERGE facility to be carbon neutral on its day of opening would almost certainly make the deliverability of the scheme economically unviable by putting it at a competitive disadvantage to facilities operating elsewhere within the UK. This would mean that the plant would be unlikely to be constructed and the benefits derived from the operation of the facility, including the carbon savings that would be achieved by diverting waste from being disposed into landfill, would be lost. The applicant readily acknowledges that the carbon intensity of the EMERGE facility would need to reduce over its operational life to contribute towards achieving net zero by 2050. Emissions are controlled through separate regulations and not through the planning system and it is reasonable for a planning authority to assume that the development will comply with emission standards and other regulatory requirements imposed through regulations and any environmental permit. The Government also has a number of pathways and policy levers for achieving its Net Zero target by 2050 across

the UK which go beyond the planning system. The 'road map' submitted by the applicant is relevant in the assessment of this planning application by setting out ways in which the facility is capable of decarbonising throughout its operational life in response to changing legislative requirements.

371. The Committee on Climate Change Progress Report to Parliament in June 2020 expressed concerns that the development of further energy from waste plants in England has potential to increase fossil fuel emissions and act as a disincentive to the circular economy. The Committee however continued to see a role for energy recovery within waste management but recommended that new plants above a certain scale (which is not specified) should only be constructed in areas confirmed to soon have CO₂ infrastructure available (of which there are currently none in the UK) and should be built incorporating carbon capture and storage or be ready to have it installed. The EMERGE facility does not incorporate carbon capture and storage (no operational plants in the UK have carbon capture and storage), but the applicant advises that it is readily capable of being retro-fitted to the process at an appropriate time when the technology becomes less complex and costly and legislation evolves.
372. Research by Catapult, an independent, not-for-profit centre of excellence set up to accelerate the transformation of the UK's energy system, identifies that energy from waste plants in the UK currently emit around 11 million tonnes CO₂ per year and this is likely to increase by another 9 million tonnes CO₂ per year with the development of further plants. They concur with the views of the Climate Change Committee that a reduction in these emissions would have a material impact on the UK's low carbon energy transition and identify that these carbon savings can be achieved through the retro-fitting of carbon capture and storage, identifying that the cost of installing carbon capture within energy from waste plants is competitive with other industrial abatement options. Catapult identify that carbon capture and storage would collect carbon from the biogenic and non-biogenic parts of the waste stream and therefore has potential to reduce the net carbon in the system.
373. Within the Extinction Rebellion representation reference is made to DEFRA's Resources and Waste Strategy Monitoring Progress Report and what Extinction Rebellion consider is an obligation to measure the estimated contribution of the proposed installation in the context of Nottinghamshire's carbon footprint. They provide their own calculation to argue that the emissions from the EMERGE facility represent over 9% of the entire CO₂ emission budget for everything that goes on in the Nottinghamshire if it is going to have a 50% chance of keeping below 1.5C global temperature from January 2021 and question whether this level of carbon 'spend' for one facility is appropriate. It is important to clarify the purpose and status of the monitoring report which may have been misunderstood by Extinction Rebellion in the context of the determination of this application. The purpose of the monitoring report referenced by Extinction Rebellion is for DEFRA to measure progress through a framework of indicators towards meeting the policies and objectives set out in DEFRA's 'Our Waste, Our Resources: A Strategy for England'. The monitoring report is not a statement of

Government planning policy and neither it, or the strategy set an obligation for local authorities, prior to making planning decisions to first calculate and create a specific carbon budget for a wider administration area and then calculate the carbon footprint of the individual application as a proportion against this. Detailed consideration of CO₂ emissions has been given both in this report and the Environmental Statement and appropriate weight has been given to these matters, including as part of the overall planning balance in accordance with relevant policy and legal requirements. Whilst regard has been had to the representations made, for the reasons set out it is not proposed to scrutinise the figures presented by Extinction Rebellion in further detail in this planning decision.

374. The parliamentary cross party think tank, Policy Connect, has reviewed waste management policy and published its own findings in a report published in July 2020 and titled 'No Time to Waste: Resources, Recovery and our Road to Net Zero'. This report sees a different role for energy from waste, acknowledging that it is not a perfect long-term solution for the management of residual waste, but accompanied by a drive to increase heat use and action to decarbonise further, they conclude that it is the best available technology and should form an essential part to the transition to net zero.
375. The Government's most recent consultation on their new Waste Management Plan for England in August 2020 also identifies a continuing role for energy from waste, specifically Page 13 of this report which confirms that... *'The Government supports efficient energy recovery from residual waste – energy from waste is generally the best management option for waste that cannot be reused or recycled in terms of environmental impact and getting value from the waste as a resource. It plays an important role in diverting waste from landfill.'*
376. On the 14th December 2020 the Government published an 'Energy White Paper - Powering our Net Zero Future' which sets out proposals for future Government policy relating to energy development. Specifically in relation to energy from waste, page 53 discusses the role that it plays in the Government's wider biomass and bio-energy strategy, identifying that the incorporation of bioenergy with carbon capture and storage into plants means that the process has the 'ability to deliver negative emissions, this makes biomass one of our most valuable tools for reaching net zero emissions'. The White Paper confirms that the Government propose to develop these plans as part of a new Biomass Strategy in 2022 which is being developed in response to the Climate Change Committee's latest annual progress report to Parliament. Page 43 of the White Paper acknowledges that the 'understanding of what is required from the electricity sector to support the delivery of net zero emissions will change over time. Our views will be informed by what we learn about the costs of decarbonising other sectors of the economy and by the costs and availability of negative emissions technologies, such as Bioenergy with Carbon Capture and Storage', thus showing that the Government acknowledges the technology concerning carbon capture and storage is evolving.

377. The pressing problem at the current time relating to waste management and its wider impact to climate change is getting waste out of landfills since this waste management solution has the greatest carbon impact. The development of additional energy recovery capacity will provide a deliverable alternative to landfill disposal, thus reducing the use of landfill, delivering carbon savings, and also reducing the risks of 'off-shoring' waste which is discouraged in Government policy. Options for the disposal of waste into landfill within Nottinghamshire are severely restricted with the last remaining operational non-hazardous landfill site at Staple Quarry near Newark due to close in 2021.
378. Current Government policy incorporated within its Review of Waste Policy 2011 and the DEFRA Energy from Waste Guide provide clear support for the further expansion of energy from waste to manage waste which cannot be recycled. There is also strong policy support for the facility through the NPPF which requires planning authorities to approve low carbon development where the impacts are (or can be made) acceptable. The December 2020 Energy White Paper continues to see a role for Energy from Waste, specifically identifying that energy recovery from biomass is one of the most valuable tools for reaching net zero emissions with the potential to result in negative carbon emissions.
379. The evidence base provided by the applicant is consistent with the conclusions reached within DEFRA's Energy from Waste Guide and in particular chapter 5 concerning future Energy from Waste policy direction insofar that energy from waste will deliver savings in carbon emissions compared to landfill disposal, but the process has to reduce its level of carbon emissions to ensure continued climate change benefits in the medium to longer term.
380. The applicant's Net Zero road map demonstrates that there are a variety of options to modify and improve the process and reduce its carbon intensity to ensure it is compliant with net zero by 2050. Carbon capture and storage forms one of the key tools to deliver these carbon savings, but the technology is still evolving which is acknowledged by the Government in the Energy White Paper and makes it difficult to set a rigid timetable for the delivery of the road map by planning condition.
381. Overall, it is concluded that the policies within the development plan are supportive of the development, notably RCS Policy 2: Climate Change seeks to maximise the use of renewable and low carbon energy, RLP Policy 16, Renewable Energy requires renewable energy (including energy from waste) to be granted planning permission where the environmental impacts are acceptable and WCS Policy 14: Managing Climate Change which requires all new waste management facilities to minimise any potential impacts on, and increase adaptability to, climate change. Wider material consideration are also supportive of a grant of planning permission, most notably NPPF paragraph 145 which requires planning applications for low carbon energy to be granted planning permission where environmental impacts are or can be made acceptable and the consistency of the development with DEFRA's

Energy from Waste Guide. The applicant's Net Zero road map demonstrates that there are a variety of options to modify and improve the process and reduce its carbon intensity to ensure it is compliant with net zero by 2050. Policy compliance with net zero across all sectors in the economy will be achieved through legislative and policy changes at a national level including pollution control to limit emission levels and potentially taxation. If the EMERGE facility did not comply with these future emission standards the pollution control regime would either not allow it to operate or make it economically unviable to operate, thus providing an appropriate level of assurance that the EMERGE facility would contribute towards meeting the net zero policy objective.

Energy Policy

382. By its nature energy from waste bridges two sectors both of which are evolving. It has its roots firmly in waste management but energy from waste is also important in terms of its energy generation and carbon emissions. Waste management is changing to be much less about how materials are disposed and more about managing discarded resources back into the economy. Likewise, energy generation is evolving to make best use of renewables and low carbon fuel sources, including novel fuels and different energy outputs, and always with an eye on energy security.
383. The DEFRA publication 'Energy from Waste: A guide to the debate' confirms that energy from residual waste is a partially renewable energy source, sometimes referred to as a low carbon energy source. The environmental statement identifies that the waste fuel used to power the EMERGE facility would incorporate a mix of material of which around 60% would be renewable. Therefore, of 43.4 MW of electricity exported to the grid from the EMERGE facility, the renewable proportion of the waste would generate circa 24.26MW.
384. As an energy source, energy from waste has a number of potential advantages beyond its renewable content. It provides a domestically-derived energy source and gives the UK greater fuel security, greater energy independence and protection from fossil fuel price fluctuations. The energy is also non-intermittent unlike many other sources of renewable energy such as wind or solar which do not generate electricity if the wind is not blowing or the sun is not shining. Energy from waste can be used to generate constant planned amounts of energy 'base load'.
385. Over the past circa 15 years the important and unremitting message of Government policy relating to renewable and low carbon energy policy is one of urgent deployment. This includes:
- The Energy White Paper (2007) which provides a positive policy framework to facilitate and support investment in renewable energy;
 - The UK Renewable Energy Strategy (2009) which aims to radically increase the use of renewable energy;

- The UK Low Carbon Transition Plan (2009) which records that the scale of change needed in the energy system is unparalleled;
- The EU Renewable Energy Directive (2009) which sets a legally binding target to source 15% of the UK's total energy from renewable sources by 2020. It should be noted that the Digest of UK Energy Statistics (published in July 2019) confirmed that in 2018 UK renewable energy provisionally accounted for 11% of final energy consumption; and
- The Energy Act (2013) which established the legislative framework and measures for delivering electricity market reform, attracting significant investment to both replace current generating capacity and upgrade the grid to cope with the rising demand for electricity.

386. Paragraph 208 of the Waste Policy Review (WPR) June 2011 sets out the reasons for the Government's support for energy from waste, stating that:

"The benefits of recovery include preventing some of the negative greenhouse gas impacts of waste in landfill. Preventing these emissions offers a considerable climate change benefit, with the energy generated from the biodegradable fraction of this waste also offsetting fossil fuel power generation, and contributing towards our renewable energy targets....providing comparative fuel security, provided it can be recovered efficiently."

387. The WPR therefore makes it plain that waste management falls within the wider energy policy context insofar that recovering energy from waste which cannot be sensibly reused or recycled is an essential component of a well-balanced energy policy and underlines the importance of maximising energy recovery from the portion of waste which cannot be recycled. Given that climate change is the Government's principal concern for sustainable development this issue is considered to be of significant importance within the assessment of this planning application.

388. The overarching National Policy Statement for Energy (NPS EN-1), published in July 2011 sets out the Government's planning policy relating to energy development and provides the primary basis for planning decisions on large scale nationally significant energy developments determined by the Secretary of State, but is also a material consideration in all planning decisions relating to energy development.

389. The overall objective of NPS EN-1 is to achieve carbon emission reductions, energy security and affordability. Key to delivering these objectives is a transition to a low carbon economy to reduce greenhouse gas emissions, and to improve the security, availability and affordability of energy through diversification. Paragraph 3.3.10 outlines the Government's commitment to dramatically increasing the amount of renewable energy generation, particularly identifying the role that the combustion of waste will play in providing this energy. The target is to source 15% of total energy (across the sectors of transport, electricity and heat) from renewable sources by 2020

(paragraph 3.4.1). Paragraph 3.4.5 outlines the urgency of need to achieve this target and states that:

“To hit this target, and to largely decarbonise the power sector by 2030, it is necessary to bring forward new renewable electricity generating projects as soon as possible. The need for new renewable electricity generation projects is therefore urgent”

390. The Energy White Paper 2020 identifies a continuing role for Energy from Waste, specifically identifying that energy recovery from biomass is one of the most valuable tools for reaching net zero emissions with the potential to result in negative carbon emissions. The Energy White Paper confirms that whilst NPS EN1 will be the subject of a review and updating, it remains the Government's national energy policy and has not been suspended during this review.
391. NPPF paragraph 154 states that when determining planning applications for renewable and low carbon development, local planning authorities should not require applicants to demonstrate the overall need for renewable or low carbon energy and approve the application if its impacts are (or can be made) acceptable.
392. This approach is reflected at a local level within RCS Policy 2 (Climate Change) part 5 which states that new decentralised, renewable and low-carbon energy schemes will be promoted and encouraged within Rushcliffe, where these are compatible with environmental, heritage, landscape and other planning considerations. RLP Part 2 Policy 16 outlines these considerations in greater detail and ensures they are considered when determining any planning application for renewable energy schemes. The policy is set out below:

RLP Policy 16: Renewable Energy

Proposals for renewable energy schemes will be granted planning permission where they are acceptable in terms of:

- a) compliance with Green Belt policy;
- b) landscape and visual effects;
- c) ecology and biodiversity;
- d) best and most versatile agricultural land;
- e) the historic environment;
- f) open space and other recreational uses;
- g) amenity of nearby properties;
- h) grid connection;
- i) form and siting;
- j) mitigation;
- k) the decommissioning and reinstatement of land at the end of the operational life of the development;
- l) cumulative impact with existing and proposed development;
- m) emissions to ground, water courses and/or air;

- | |
|--|
| n) odour;
o) vehicular access and traffic; and
p) proximity of generating plants to the renewable energy source. |
|--|

393. The justification to this policy (contained in paragraph 5.1) confirms that renewable and low carbon energy can be generated by a wide range of technologies including energy from waste. The proposed development is considered to accord with RLP Part 2 Policy 16 for the following reasons:
- a. The subsequent sections of this report conclude that the development is inappropriate development in the context of Green Belt policy contained in the NPPF, but there are very special circumstances' which clearly outweigh the harm to the Green Belt and any other harms and the development is therefore considered to be acceptable in context of Green Belt policy albeit as a departure.
 - b. The subsequent sections of this report conclude that the proposed development would not result in a significant adverse impacts in respect of landscape/visual effects; ecology and biodiversity; traffic; noise; air quality (including odour) and human health; ground conditions; surface water; and the historic environment;
 - c. It is concluded that the proposed development would not result in a significant adverse environmental or amenity effect on the nearest sensitive receptors;
 - d. A grid connection is available and would ensure that the proposed development would be able to export electricity to the grid;
 - e. The design of the development is considered acceptable.
394. The unremitting message of Government policy relating to energy policy is one of urgency: the Energy White Paper seeks to provide a positive policy framework to facilitate and support investment in renewable energy; the aim of the UK Renewable Energy Strategy is to radically increase the use of renewable energy; and the UK Low Carbon Transition Plan records that the scale of change needed in its energy system is unparalleled. In short, the expectation of industry is to provide as much renewable energy capacity as swiftly as possible.
395. It is absolutely clear that Government policy requires that significant weight should be given to a proposal's provision of renewable energy and the Energy White Paper, the NPS EN-1 and the NPPF make it clear that local authorities should look favourably upon planning applications for renewable energy developments, an approach which is reflected in RLP Policy 16 which requires renewable energy schemes to be granted where the environmental effects are considered acceptable.
396. The EMERGE facility would assist in providing security of electrical supply utilising UK sourced, dependable residual waste and lessening dependence on insecure foreign imports of carbon rich fossil fuels for energy. The facility would also provide diversified energy in accordance with Government policy

to have a wide range of different energy generators and move away from the concentration on coal, gas and nuclear energy. The facility would assist in providing a dispersal of generating stations in accordance with Government policy to achieve a greater distributed energy network, and lessen the dependence on a small number of very large centralised plants. The energy produced within the EMERGE facility would not be intermittent in nature or subject to the vagaries of the weather like most other renewable energy, and the electrical energy is readily dispatchable to the grid system.

397. In conclusion, the EMERGE facility would provide energy that meets what can be described as the four 'D's': that is such energy would be dependable, diversified, distributed and dispatchable and therefore would fully contribute to meeting the objectives of NPS EN-1, conforming with Government energy policy and supported by RLP Policy 16. Although the Government recommends these benefits should be given significant weight within the overall planning balance, the level of benefit actually given to the low carbon energy produced by the EMERGE in the planning balance is tempered to a moderate beneficial weighting in acknowledgment to the importance given to the development of heating networks served by energy from waste in Government policy and the extra efficiencies these provide.




Location of the EMERGE facility in relation spatial planning policies incorporated within the development plan

398. The development plan for the area incorporates strategic policies within the WCS and RCS which guide the general location of development as well as more specific site allocations within the RLP. The Policies Map which supports the RLP identifies that the entire Power Station site is located within the Green Belt. The power station site does not have any specific policy allocation.
399. Nottinghamshire and Nottingham Waste Core Strategy: The WCS sets out strategic policy and criteria which guide the general location and types of waste management facilities and incorporate policies which establish the broad principles to narrow down future site choices and assess planning applications. The WCS does not allocate any specific sites, identifying that where appropriate, specific site allocations will be included in a separate sites and development management policies document. Although Nottinghamshire County Council and Nottingham City Council are working together to prepare a new Waste Local Plan which will give consideration to site allocations, the plan is at a very early stage of preparation and has not currently identified any potential site allocations to assess the merits of the Ratcliffe site against.
400. WCS Policy WCS7 (General Site Criteria) sets out the broad principles that are used to narrow down future site choices, incorporating a matrix to identify the locations where different categories of waste development will be supported, subject to their being no unacceptable environmental impacts.






The relevant parts of the policy to the assessment of this planning application are set out below:

Policy WCS7 - General Site Criteria

Waste management facilities will be supported in the following general locations, as shown in the matrix below, subject to there being no unacceptable environmental impacts:

-  **Employment land** – areas which are already used for, or allocated for employment uses such as industrial estates, business or technology parks etc.
-  **Derelict land/other previously developed land** – land that is no longer needed or has been abandoned. This could include former un-restored or poorly restored colliery land in need of restoration, old quarries, disused railway land etc.
-  **Green Belt** – land within the Green Belt where very special circumstances can be demonstrated. This could include derelict or previously developed land, old quarries etc. All proposals will be subject to Green Belt policies.

● Likely to be suitable for small, medium or larger facilities. ○ Only likely to be suitable for smaller facilities.

					
Energy Recovery					
Incineration		●	●		

401. For energy recovery/incinerator facilities the policy is supportive of them being developed on employment land including areas which are already used for or allocated for employment uses as well as derelict land/other previously developed land.
402. Paragraph 7.39 of the supporting text for Policy WCS7 explains that:
- ‘Larger energy recovery plants (including incineration, gasification, pyrolysis, and possibly anaerobic digestion) will require a large industrial type building with a tall stack or chimney and, in some cases, may have visible plant or pipe-work on the outside. These are therefore best located near other industrial uses of a similar scale and bulk with good road and/or rail or water access for transport. They should also be close to other uses that can make use of the heat and electricity generated or close to a suitable connection to the national grid.’*
403. The proposed EMERGE facility is located within the curtilage of the Ratcliffe on Soar Power Station site which is an established employment site and is also previously developed land. The conclusion that the development site meets the definition of previously developed land is quantified within appendix 4.1 of the applicant’s planning supporting statement which incorporates a technical note which reviews the principle consents for permanent development at the Power Station since its original consent in August 1963 and confirms that the consents have no development management provisions which require the demolition of the buildings or the restoration of the site following its closure.
404. In the context of paragraph 7.39, the applicant acknowledges that many of the main buildings of power station and related components are likely to be removed following the power station’s closure. Although the applicant has aspirations to comprehensively redevelop the site as a business park, this does not have planning permission and therefore there is no certainty that this would occur. Notwithstanding any site clearance and redevelopment

aspirations, significant infrastructure would remain on the Ratcliffe site following the closure of the coal fired power station. These include the Uniper Engineering Services offices, the National Grid substations and power lines, the gas turbine generating facility, the railway sidings, the gypsum and limestone storage buildings and their conveyor links to the sidings, and other lesser elements of infrastructure such as internal roads linking the preceding elements. The proposed EMERGE facility would be sited amongst this significant infrastructure which are of a similar scale and bulk to the EMERGE buildings. It is also acknowledged that the site has good road and rail links and connection to the national grid.

405. In terms of the environmental effects of the development, these are considered in subsequent sections of this report wherein it is concluded that there would not be any significant unacceptable environmental impacts during either its construction or operation.
406. It is therefore concluded the development is supported by WCS policy WCS7 and the reasoned justification behind this policy incorporated within WCS paragraph 7.39.
407. WCS Policy WCS4: Broad locations for waste treatment facilities aims to identify appropriate locations for waste treatment facilities by promoting the development of waste management infrastructure close to where waste is produced and linking the size of facilities to the amount of waste needing treatment. The policy discourages waste development in the Green Belt where it constitutes inappropriate development. The policy is set out below:

Policy WCS4 Broad locations for waste treatment facilities

The development of small-scale waste treatment facilities will be supported in all locations where these will help to meet local needs and fit in with the local character.

Smaller/medium sized waste treatment facilities will be supported in, or close to, the built up areas of Nottingham, Mansfield/Ashfield, Newark, Retford and Worksop.

Large-scale waste treatment facilities will be supported in, or close to, the built up areas of Nottingham and Mansfield/Ashfield.

Development of facilities within the open countryside will be supported only where such locations are justified by a clear local need, particularly where this would provide enhanced employment opportunities and/or would enable the re-use of existing buildings.

In the Green Belt proposals for built waste management facilities would constitute inappropriate development and will be permitted only where need and other material considerations amount to very special circumstances sufficient to outweigh harm to the Green Belt and any other harm identified.

408. The policy promotes a hierarchical pattern of locating the largest waste facilities close to the areas of major population and employment on the assumption that these areas generate the largest quantities of waste. The policy is supported by Plan 4 – Key Diagram which visually identifies a

geographical area that is considered as being in 'close proximity' to Nottingham city for the purposes applying Policy WCS4. Although Plan 4 is schematic with limited background setting and drawn on an un-scaled plan, it identifies that the planning application site is sited towards the southern edge but within the area defined as close to the built-up area of Nottingham. The location of the planning application site for the development of a large-scale waste treatment facility is therefore supported in terms of its proximity to Nottingham's waste arising in the context of the first requirement of Policy WCS4.

409. Assessment of Green Belt Policy: In terms of wider development plan policy relating to Green Belt, RCS Policy 4: Nottingham-Derby Green Belt strategically retains a Green Belt around Nottingham. RLP Policy 21: Green Belt states that the boundaries of the Green Belt in Rushcliffe are as defined on the Policies Map. This map confirms that the entirety of the Ratcliffe on Soar Power Station site is within the Green Belt. RLP Policy 21 confirms that planning applications for development in the Green Belt will be determined in accordance with the NPPF.
410. National planning policy regarding the Green Belt is set out in Section 13 of the NPPF and in particular paragraph 145(g) which is relevant to this application and which states:
- 'A local planning authority should regard the construction of new buildings as inappropriate in the Green Belt. Exceptions to this are:*
- g) limited infilling or the partial or complete redevelopment of previously developed land, whether redundant or in continuing use (excluding temporary buildings), which would:*
 - not have a greater impact on the openness of the Green Belt than the existing development.'*
411. In short, the policy establishes that the construction of new buildings should not be regarded as inappropriate development in the Green Belt where they constitute partial redevelopment of previously developed land (irrespective of whether the existing development is redundant or not), so long as the new buildings have no greater impact on the openness of the Green Belt than the existing development.
412. WCS Policy WCS4 incorporates a more rigid interpretation of Green Belt policy in relation to waste development, stating that *'proposals for built waste management facilities would constitute inappropriate development'*. Policy WCS4 does not incorporate any scope to grant planning permission for waste development on the basis that it is not inappropriate development and requires 'very special circumstances' to be demonstrated in all cases. The approach within Policy WCS4 does not take account of the policy set out within NPPF paragraph 145(g) regarding the re-development of previously developed land and therefore the two policies are not consistent with each other. In terms of deciding which policy should take precedence in this planning decision, NPPF paragraph 212 confirms that policies within the NPPF are material considerations which should be taken into account when

dealing with planning applications. NPPF paragraph 213 confirms that existing policies in development plans should not be considered out-of-date simply because they were adopted or made prior to the publication of the NPPF but advises that greater weight should be given to older development plan policies which continue to be consistent with NPPF policy. Since there is a lack of consistency between WCS policy WCS4, which was adopted in 2013 and the NPPF which was published in 2019, it is concluded that greater weight should be given to the NPPF policy within this decision, and in particular its scope to consider the partial or complete redevelopment of previously developed land as not being inappropriate in the Green Belt.

413. The applicant has carried out their own appraisal of Green Belt policy. The context for the applicant's appraisal uses the construction of the EMERGE facility and the allied demolition of the two southernmost cooling towers as part of an overall development project.
414. The EMERGE Centre planning application site boundary does not incorporate the footprint of the two cooling towers within the red line boundary planning application site and does not specifically seek planning permission for the actual demolition of the two cooling towers. The applicant confirms that the demolition of the two cooling towers would be carried out under a separate 'planning process' either through permitted development rights under Part 11 Class B of The Town and Country Planning (General Permitted Development) (England) Order 2015 following prior approval of the local planning authority as to the method of demolition or, if the demolition is classed as EIA development in its own right, by way of planning permission. Regardless of the process, the applicant has confirmed that they would enter a commitment to demolish the cooling towers linked to any planning permission for the EMERGE Centre by a planning condition. This approach is perfectly feasible given that the cooling towers are on land within the applicant's ownership. On the basis that the demolition of the two cooling towers can be delivered by this mechanism, the applicant's assessment of this development project is that it represents a partial redevelopment of the wider power station site all of which is washed over by a Green Belt designation. On this basis, the applicant considers NPPF Paragraph 145(g) to be relevant.
415. The applicant's assessment gives consideration to the level of impact which the wider development across the power station site would have on the openness of the Green Belt, assessing both its spatial and visual effects. The methodology used by the applicant to assess the spatial and visual effects on the openness of the Green Belt is consistent with the methodology set out in the Government's Planning Practice Guidance on the role of the Green Belt in the planning system.
416. In terms of assessing the effects on the openness of the Green Belt from a spatial perspective the applicant has given consideration to the changes in volumetric and building proportions within the scheme. The EMERGE development has a total footprint of 16,978m², the max building height is 49.5m with a stack height of 110m and a volume of 524,066m³. The cooling

towers that would be demolished are both 114m high. Each has a volume of 386,211m³, and therefore their combined volume is 772,422m³. Each has a diameter of approximately 89m at ground level, giving an individual footprint of approximately 6,221m², and a combined footprint of approximately 12,442m². The top of each tower has a diameter of approximately 52m. As such, the proposed development would result in an increase in the built footprint of development at the Power Station (by approximately 36.5%), but a reduction in the volume of built structures by approximately 32% and thus represents an overall reduction in the mass of development at the site. The tallest element of the ERF (the stacks) would be 4m lower in height than the cooling towers. The proposed stacks would be slender structures, with a diameter of approximately 2.25m each. In contrast, the cooling towers are bulky structures, being 52m in diameter at their narrowest (at the top) and 89m in diameter at the bottom. The diameter of the ERF stacks would therefore be less than 5% of the top diameter of the cooling towers. The bulkiest element of the ERF (the main building) would have a maximum roof height of 49.5m (the boiler hall). This is less than 44% of the height of the cooling towers, with much of the main building roof set at a lower elevation than this, as would other associated structures.

417. Therefore, whilst the EMERGE facility would have a greater footprint than the cooling towers, there would be a significant overall reduction in the volume of built structures across the wider power station site. There would also be a reduction in the visible mass of structures at the power station due to the difference in height between the proposed and removed structures. On this basis, it can be concluded that the proposed ERF would be materially smaller than the two cooling towers that would be removed. As such, there would be a long-term reduction in the scale and volume of built development in the Green Belt and thus a reduction in the effects on the 'actual openness' of the Green Belt across the wider power station complex once the cooling towers have been demolished.
418. In terms of assessing the effects of the EMERGE development on the perceived openness of the Green Belt, this is a far more subjective assessment with the change in view that would result from the demolition of the two cooling towers and the development of the EMERGE facility varying dependent upon location.
419. The two cooling towers that would be removed are the two southernmost structures. They are visually prominent and bulky and their removal would reduce the overall horizontal field of view occupied by the Power Station from most locations and therefore generally have a positive effect upon the perception of openness. From the south and west, the removal of the two cooling towers would be very clearly visible, whereas the new EMERGE development would be screened by the retained structures at the power station, thus the overall effect of constructing the EMERGE facility and the removal of the two cooling towers would be that the openness of the Green Belt would be enhanced when viewed from the south and west. From the north and east, views of the Power Station would continue to be restricted by the adjacent wooded ridges and therefore the level of change in perceived

openness would be less, albeit there would be a minor improvement on the openness of the Green Belt when viewed from these directions. Overall, the new EMERGE facility would have a reduced influence upon the perceived openness of the Green Belt due to its relative size in relation to the two cooling towers that would be demolished, its relative size in relation to other retained structures, its location within the power station in close proximity to these retained structures and views of the development typically being well screened.

420. Overall, the applicant concludes that the development of the EMERGE facility would have a positive effect in terms of maintaining and enhancing the openness of the Green Belt across the wider power station site, both in the context of 'actual' and 'perceptual' effects following the removal of the two cooling towers and therefore the applicant concludes that it is not inappropriate development in the Green Belt in the context of NPPF paragraph 145(g).
421. The applicant's appraisal of the effects on the openness of the Green Belt and its conclusions are considered reasonable and robust to assess the level of effect on the openness of the Green Belt from the overall development project across the wider power station complex following the demolition of the two cooling towers.
422. However, the development timetable identifies that it is not proposed to demolish the two cooling towers immediately following the construction of the EMERGE facility resulting in a transitional period when both the EMERGE facility and the cooling towers would co-exist alongside each other. For the duration of this 'transitional' period there would be an increase in the number of buildings on the Ratcliffe Power Station site and inevitably the longer the EMERGE facility and the two cooling towers co-exist at the same time the greater the level of impact on the openness of the Green Belt. The applicant's appraisal has not given any consideration to these transitional effects.
423. The timetable within the planning submission sets out that the two cooling towers would be demolished within six years following the start of commercial operations at the EMERGE facility. As part of the first Reg. 25 submission the applicant was requested to re-appraise this timetable and assess whether this could be undertaken at an earlier date. The applicant confirms there is a need to retain the existing generating capacity until 2025, thereafter, the applicant's re-assessment has drawn on experience with similar projects to conclude that the power station almost certainly needs to be demolished in a single contract. The applicant has confirmed they want to deliver this demolition as soon as possible but need a realistic timescale to do, acknowledging that the decommissioning and subsequent demolition is a very complex process which the applicant considers will take the best part of 5 years to complete. The demolition of the cooling towers would be one of the final parts of the demolition programme. The applicant therefore has identified that the earliest they could commit to the demolition of the two

cooling towers is the end of 2030, confirming they would agree to this date being set into any legal agreement.

424. The applicant's demolition timetable therefore confirms that there would be a period of up to five to six years following the completion of construction works when both the EMERGE facility and the cooling towers would co-exist alongside each other and additionally a three-year construction period during which the structure of the EMERGE facility would take shape. For the duration of this 'transitional' period there would be an increase in the number of buildings on the Ratcliffe on Soar Power Station site and inevitably the longer the EMERGE facility and the two cooling towers co-exist at the same time the greater the level of impact on the openness of the Green Belt.
425. NPPF paragraph 145(g) sets out the planning policy context to conclude that the partial or complete redevelopment of previously developed land can be considered as not being inappropriate development in the Green Belt. There is not a policy obligation which requires the existing buildings to be demolished before new development proceeds, and policy compliance comes down to a matter of judgement in terms of whether some overlap between building works progressing and demolition works being completed is not inappropriate whilst still ensuring that the Green Belt, in particularly its openness is not adversely affected by the development.
426. Whilst it is acknowledged that the transitional period is temporary its duration does extend to the end of 2030 which is considered to be more than just a short incidental period when there would be cumulative negative impacts to the openness of the Green Belt. These impacts should be taken into account when assessing the effects of the development on the openness of the Green Belt and therefore compliance with Green Belt policy.
427. Paragraph 1 of the Government's Planning Practice Guidance in connection with Green Belts confirms that the duration of the development and its remediability taking into account any provisions to return land to its original state or to an equivalent (or improved) state of openness can be taken into account when assessing impacts on openness. Since the effects during the transitional period would impact on the openness of the Green Belt and thus not keep the Green Belt permanently open, the development fails to satisfy this fundamental aim of Green Belt policy incorporated in NPPF paragraph 133 and as a result officers consider that the development does not satisfy the test set out within NPPF paragraph 145(g) which requires that the redeveloped site should not have a greater impact on the openness of the Green Belt than the existing development. It is therefore concluded that, as a result of the transitional period, the development should be assessed as inappropriate development in the context of Green Belt policy.
428. NPPF paragraph 145(g) sets out that the partial redevelopment of previously developed land is not inappropriate development within the Green Belt when the new development does not have a greater impact on the openness of the Green Belt than the existing development. The applicant's appraisal has applied this test across the wider power station complex. However, the red

line boundary of the planning application site does not incorporate the two cooling towers that are proposed to be demolished and is limited to a circa 4ha parcel of land on which the EMERGE facility would be developed. If a narrower assessment of Green Belt policy was made in the context of the effect the EMERGE facility has on the openness of the Green Belt with this assessment being limited to what is proposed specifically on the planning application site rather than the wider power station complex, the inevitable conclusion is that the EMERGE centre would introduce some very large and visible buildings which would have a much greater impact on the openness of the Green Belt than the existing site which is characterised by an area of low lying hardstanding which does not incorporate any buildings and therefore does not have a strong influence in terms of its visual prominence and prejudicial effects to the openness of the Green Belt in its current condition.

429. Taking this narrow assessment of the effects on the openness of the Green Belt, the development proposed within the planning application site therefore leads to the inevitable conclusion that the EMERGE centre would not satisfy the policy tests within NPPF paragraph 145(g) insofar that the new development would have a greater impact on the openness of the Green Belt than the existing development which is incorporated on the site, and thus should be assessed on the basis that it is inappropriate development within the Green Belt. By contrast if the cooling towers had been incorporated within the red line and the description of the development then it would have been possible to consider the development as not being inappropriate development in the context of the policy test in NPPF paragraph 145(g). The demolition of the two cooling towers and the influence this has on the openness of the wider power station complex are material considerations in the assessment of the planning application, but these matters are considered in the context of being 'very special circumstances.
430. Having regard to the above, whilst it is acknowledged that the applicant's assessment of compliance with Green Belt policy taken on the basis of the completion of the wider development project following the demolition of the two cooling towers is not unreasonable, the methodology used by the applicant does not acknowledge that there are site specific impacts to the openness of the Green Belt nor does it consider the transitional effects of the development. Taking a more precautionary approach to the consideration of these issues inevitably leads to a conclusion that the development fails to satisfy the important test set out within NPPF paragraph 145(g) requiring the redevelopment of previously developed land to have no greater impact on the openness of the Green Belt than the existing development and therefore the development is considered as inappropriate in the context of Green Belt policy.
431. With NPPF paragraph 145(g) not considered to be the appropriate policy test, consideration needs to be given to NPPF paragraph 143 which states that:

'Inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances.'

and NPPF paragraph 144 which states that:

‘when considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. ‘Very special circumstances’ will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations.’

432. The policy requirement within the NPPF is quite clear insofar that inappropriate development in the Green Belt should not be granted planning permission except where ‘very special circumstances’ can be demonstrated and in such cases only where the harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal is clearly outweighed by other considerations having regard to the substantial weight that should be given to any harm to the Green Belt within this balance.
433. In terms of the level of harm to the Green Belt by reason of inappropriateness, these have been identified as the ‘transitional’ effects of the development until such time that the cooling towers are demolished and the effects on the openness of the Green Belt if a narrow view of the development is taken limited to that which is proposed within the boundaries of the planning application site in isolation of the wider power station complex.
434. In making the assessment of very special circumstances, NPPF paragraph 144 also requires consideration to be given to any other harm resulting from the development. Some areas of harm have been identified in subsequent sections of the report. In the interests of brevity these are not re-examined in depth within this appraisal of ‘very special circumstances’ but in summary the development results in some negative visual impacts of a magnitude assessed as not being significantly harmful (above moderate adverse) and the development has some negative (less than substantial) impacts to the heritage asset of the area. Furthermore, the construction and operation of the EMERGE facility would also result in some residual minor environmental issues which have potential to influence local levels of air quality, noise, dust and ecology, but the magnitude of effect would be within the parameters of established environmental control limits and are readily capable of being mitigated/controlled through the planning conditions, but nevertheless are taken into consideration in this assessment of very special circumstances.
435. As part of the policy requirement within NPPF paragraph 144, substantial weight is given to the harms identified to the Green Belt by reason of inappropriateness and the other harms from the development are appropriately acknowledged, but it is considered that there are relevant considerations in this Green Belt assessment which outweigh the harm that have been identified and represent ‘very special circumstances’ to allow the development to progress in the context of Green Belt policy.

436. Firstly, in the context of the direct harm that has been identified to the Green Belt, the following considerations are relevant which mitigate much of the harm that has been identified.
- a. In terms of the transitional harm to the openness of the Green Belt, this is restricted to the time limited period when the EMERGE facility and the two cooling towers co-exist on the site. This period will expire no later than the end of 2030 when the cooling towers will be demolished. Whilst NPPF paragraph 144 requires substantial weight to be given to the harm to the openness of the Green Belt, NPPF Paragraph 133 confirms that the essential characteristics of Green Belts are their openness and their permanence. The impacts that have been identified are temporary and once the cooling towers are removed the development would have a permanent positive effect insofar that it would maintain and enhance the openness of the Green Belt across the wider power station site. These positive longer-term effects are material considerations in the planning assessment which substantially re-balance most of the harm caused to the openness of the Green Belt and are a key consideration in the assessment of very special circumstances in terms of minimising the level of transitional harm that has been identified.
 - b. In terms of the effects on the openness of the Green Belt that have been identified from assessing the effects of the development at a site specific level, substantial weight is given to the negative impacts to the Green Belt which occur from the significantly greater impact the EMERGE development has on the openness of the Green Belt than the existing site features. However, the arrangements submitted by the applicant for the demolition of the two cooling towers across the wider power station site are material planning considerations which provide scope to offset the site specific impacts that have been identified and are acknowledged as a very special circumstance which re-balances the level of harm caused to the openness of the Green Belt across the wider power station site.
437. The demolition of the two cooling towers therefore is of key importance to re-balancing the two areas of main concern in relation to compliance with Green Belt policy and it is important that there is a robust and enforceable mechanism in the planning decision to ensure the cooling towers are demolished within an appropriate time frame to give credibility to the very special circumstances. To ensure this, it is proposed to regulate the demolition of the two cooling towers by planning condition to impose a legally binding requirement to ensure they are demolished by the end of 2030.
438. In terms of other considerations which are relevant to the assessment of 'very special circumstances', the following key benefits are identified which merit consideration in this assessment:
- a. There is a clear need for additional waste management capacity to address identified shortfalls in residual waste management recovery

capacity within Nottinghamshire and Nottingham as well as regional and national shortfalls which the EMERGE facility would assist in addressing.

- b. The use residual waste as a fuel to generate energy and assist in the diversion of waste from landfill disposal in the EMERGE facility will assist in delivering more sustainable waste management at a higher level in the waste hierarchy
- c. The use of the EMERGE facility for the management of this waste will result in significant reductions in CO₂ emissions compared to the managing the same quantity of waste within a landfill facility.
- d. The EMERGE facility will generate low carbon energy. Policy within the NPPF, RCS Policy 2 and RLP Policy 16 is clear insofar that low carbon energy developments should be approved where the environmental impacts are (or can be made) acceptable.
- e. The job creation and economic benefits provided by the development should be given significant beneficial weight,

439. In conclusion on Green Belt matters, the development has been assessed against NPPF Green Belt Policy, and in particular the policy requirements of paragraph 145(g) relating to the redevelopment of previously developed land within the Green Belts. This assessment identifies that there would be some negative impacts to the openness of the Green Belt associated with the site specific effects insofar that the EMERGE development would have a greater impact on the openness of the Green Belt than the existing site features and also 'transitional' impacts which occur for the period before the two cooling towers are demolished.
440. The development therefore has been assessed as not fully complying with the requirements of NPPF paragraph 145(g) and thus is considered as inappropriate development in the context of Green Belt policy. NPPF paragraphs 143 and 144 set out a clear policy requirement insofar that inappropriate development in the Green Belt should not be granted planning permission except where 'very special circumstances' can be demonstrated and in such cases only where the harm to the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal is clearly outweighed by other considerations having regard to the substantial weight that should be given to any harm to the Green Belt within this balance.
441. In terms of making the assessment of whether very special circumstances exist, the transitional and site-specific impacts to the openness of the Green Belt have been given substantial weight in this assessment. Other harms from the development have also been considered. Very special circumstances have been identified and it is noted that the key concerns relating to compliance with Green Belt policy have been significantly re-balanced by the arrangements to demolish the cooling towers across the wider power station site. Other key benefits have also been acknowledged relating to sustainable waste management, the production of low carbon

energy, reductions in CO₂ emissions and job creations, including the national and local policy support for these benefits.

442. Overall, it is concluded that 'very special circumstances' do exist and these benefits clearly outweigh the harm to the Green Belt and any other harms. The proposed development therefore is considered acceptable in the context of Green Belt policy and NPPF paragraphs 143 and 144, albeit as a departure.
443. The Town and Country Planning (Consultation) (England) Direction 2009 imposes a requirement on planning authorities to refer any application which involves inappropriate development in the Green Belt where it is proposed to create over 1000 square metres of floorspace. The regulations allow the Secretary of State an opportunity to consider whether to exercise his powers to call-in the planning application for determination. Since the EMERGE facility seeks planning permission for 15,764 square metres of floorspace and the development is assessed as inappropriate development in the Green Belt, the requirements of this direction need to be followed. Therefore, if members are minded to support a grant of planning permission it will be necessary to refer this decision as a Green Belt departure and provide the Secretary of State a 21 day period to decide whether he wishes to intervene in the decision and call-in the planning application before the County Council issue the decision notice.
444. Rushcliffe Local Plan Part 1: Core Strategy and Rushcliffe Local Plan Part 2: Land and Planning Policies: RCS Policy 5: Employment Provision and Economic Development identifies that the economy will be strengthened and diversified through the provision of new floorspace (across all employment sectors) to meet re-structuring, modernisation, and inward investment needs. Of particular relevance to the proposed development is criterion 5 which encourages economic development associated with Centres of Excellence in Rushcliffe (such as the Ratcliffe-on-Soar Power Station, amongst others), including their expansion and allocating land specifically to meet the needs of high technology industries. Paragraph 3.5.21 (which supports Policy 5) confirms that: *"...by building on the strengths of organisations which have a high profile nationally and internationally there will be significant benefits for the local economy. By supporting the existing Centres of Excellence there will be an opportunity for new enterprises to develop in locations where they have access to a support infrastructure which is tailored to their needs. These Centres of Excellence include Ratcliffe on Soar Power Station [amongst others]. Proposals for new sustainable development, changes of use or redevelopment of existing buildings within these locations will be favourably considered."*
445. The policy is assessed as being supportive of the development on the basis that the development would create new employment floorspace and economic development at the Power Station site and support the Centre of Excellence through the provision of a new decentralised, renewable low-carbon energy scheme that has the potential to provide energy (electricity and heat) to future uses thus representing sustainable development.

446. RLP Policy 15: Employment Development identifies that planning permission will be granted for the expansion, conversion or redevelopment of land and premises for employment uses on allocated employment sites and other employment sites provided:
- “a. the employment use is within Use Classes B1, B2 or B8, or is an employment generating use which is compatible with its surrounding uses;*
- b. the employment use provides facilities and services which support the functioning of the employment site provided they are of an appropriate scale; and*
- c. the proposal would not cause a significant adverse impact on the amenity of nearby residents and occupiers.”*
447. The policy also identifies that *“planning permission will be granted provided there is no significant adverse impact on highway safety and adequate provision for access and parking is made.”*
448. Although the site is not located on one of the defined allocated employment sites within the Rushcliffe area, it is located within the curtilage of the Power Station site which forms a large employment site. The development of an Energy Recovery Facility is classed as a ‘sui generis’ use, but it would employ 45 people once operational and is compatible with the surrounding Power Station (criterion a); the scale of the development is appropriate in the context of the wider power station and the development complements the existing use of the site by generating electrical power for export to the grid as well as potentially supplying heat and power to existing and potential future businesses at the power station site (criterion b); The assessment of environment effects demonstrates that the proposed development would not cause a significant adverse effect on the amenity of the nearest sensitive receptors and there would be no significant adverse impact on highway safety with the site benefitting from adequate access and parking (criterion c). It is therefore concluded that RLP Policy 15 is supportive of the development.

Overall conclusion regarding locational planning policy incorporated in the development plan

449. The analysis of the locational aspects of the development plan concludes that it is supportive of the development. Key policy support is provided through WCS Policy 7 which promotes the use of industrial and previously developed land for energy recovery facilities and WCS4 which supports the development of large-scale waste treatment facilities in close proximity to Nottingham. In the context of Green Belt policy, the proposed development is considered to be inappropriate development but it is considered that ‘very special circumstances’ have been demonstrated and these benefits clearly outweigh the harm to the Green Belt and any other harms, taking account of the substantial weight given to the harm to the Green Belt. The proposed development therefore is considered acceptable in the context of Green Belt

policy, albeit as a departure in the context of NPPF Paragraph 143 and 144. There is also policy support for development at the power station site provided by RCS Policy 5 and RLP Policy 15.

450. NPPF paragraph 11 incorporates a presumption in favour of sustainable development, setting out that development which accords with an up-to-date Development Plan should be approved without delay. The conclusion that the locational policies incorporated within the Development Plan is supportive of the siting of the EMERGE facility at the Ratcliffe on Soar Power Station site is appropriate subject to there not being unacceptable environmental impacts. Since one of the main tests in any planning decision is the question of whether the location of the development site is appropriate, demonstrating compliance with the land use policies of the Development Plan is of key importance and given significant beneficial weight in the overall planning balance.

Socio-economic and employment implications

451. Chapter 6 of the NPPF incorporates planning policy in relation to the socio-economic effects of development. Specifically, NPPF paragraph 80 states that:

‘Planning policies and decisions should help create the conditions in which businesses can invest, expand and adapt. Significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development’.

452. NPPF paragraph 7 confirms that achieving sustainable development is the primary objective of the planning system with NPPF paragraph 8 confirming the importance that the economic role of development has in delivering sustainable development.
453. RCS Policy 5: Employment Provision and Economic Development reflects NPPF policy by supporting the strengthening and diversification of the economy across all employment sectors and specifically within paragraph 5, the policy identifies the role that the Radcliffe on Soar Power Station site may contribute in meeting this objective.
454. The Environmental Statement incorporates an assessment of socio-economic effects of the proposal including impacts on local populations, identifying that there are a number of socio-economic benefits associated with the Proposed Development, specifically:
- An inward capital investment of circa £330 million;
 - The creation of 45 permanent jobs, together with the creation of up to 600 temporary skilled, semi-skilled and non-skilled jobs during the construction phase;

- A further circa 81 jobs are likely to be created or supported by indirect or induced expenditure during the operational life of the facility (e.g. services bought-in to the site, or spending outside the site by employees);
 - The creation of new local apprenticeships, working with local training providers and advertising job opportunities locally;
 - Opportunities to deliver significant annual fiscal benefits to Rushcliffe Borough Council through the retention of business rates;
 - Opportunities to ensure that local residents and businesses have access to employment and business supply chain opportunities;
 - Generating electricity and heat from a low carbon source and providing a potential source of such energy to future users of the Power Station site; and
 - Potential opportunities to create further value in the waste processing chain through the sorting of recyclable materials and the utilisation of process by-products which can be used in other sectors (i.e. bottom ash in the construction sector).
455. The applicant also identifies that the development is in a location specially identified by the East Midlands Development Corporation (EMDC) as a strategically important area for future economic growth in the East Midlands. The vision for the Power Station is to create an employment site based around modern industrial and manufacturing uses, underpinned by a sustainable energy theme. This vision is in its early stages but the applicant views the proposed EMERGE facility as the catalyst for the future redevelopment of the power station site based around generating low-carbon and partially renewable energy for the future industry and manufacturing uses.
456. The East Midlands Development Corporation (EMDC), is currently operating in shadow form supported by a range of public and private sector organisations. EMDC has identified the Power Station site as one of three strategically important locations for future economic growth in the East Midlands around the proposed HS2 station at Toton, East Midlands Airport and the SEGRO Logistics Park, and Ratcliffe-on-Soar power station.
457. Whilst acknowledging that the wider redevelopment of the power station site may provide development opportunities which complement the EMERGE facility, particularly in the context of using the heat output from the process, it is important to acknowledge that the aspirations for the wider development of the site promoted by EMDC's vision for the site do not benefit from either a development plan allocation or a grant of planning permission and therefore little or no weight can be given to them in the determination of this planning application.
458. It is therefore concluded that the construction phase of the development would have a moderate beneficial effect for the duration of building works,

although for individual businesses and workers, particularly for those which are locally based as well of other businesses forming part of the supply chain, this benefit could be significant. Once operational, the enhanced employment opportunities and investment into the local economy would clearly be beneficial and could potentially provide some continued employment opportunities for existing power station staff.

459. The job creation and increase in gross value added that would result from the development are considered beneficial and therefore the development is supported by the emphasis provided in the NPPF and RCS Policy 5. In terms of the weight that the Council should give to these economic benefits within the overall planning assessment, the NPPF advises that significant weight should be given to these economic benefits and their contribution to delivering sustainable development.
460. The applicant has confirmed that they would be willing to agree to a commitment to ensure the positive economic benefits that would be derived from the EMERGE development provide maximum local benefit through:
- The use of labour agreements to maximise the proportion of local construction workers;
 - A recruitment/training programme with a focus on the closest job centres; and
 - Local procurement of products and services where possible.
461. A planning condition is recommended to ensure that these potential local economic benefits are delivered.

Assessment of Potential Environmental Effects

462. WCS Policy WCS13: Protecting and enhancing our environment supports the development of a network of waste management facilities which maintain and where possible enhance environmental quality. The policy is set out below:

Policy WCS13 Protecting and enhancing our environment

New or extended waste treatment or disposal facilities will be supported only where it can be demonstrated that there would be no unacceptable impact on any element of environmental quality or the quality of life of those living or working nearby and where this would not result in an unacceptable cumulative impact. All waste proposals should seek to maximise opportunities to enhance the local environment through the provision of landscape, habitat or community facilities.

463. Supporting paragraph 7.61 acknowledges that the detailed impacts will be controlled through the saved policies of the WLP and relevant policies from the District Councils' Local Development Frameworks. Of particular

relevance is RLP Policy 1: Development Requirements which sets out an over-arching criteria-based policy to require that all development is carried out so that it satisfactorily protects amenity and environmental quality.

464. Appendix B of the NPPW incorporates further guidance on the potential environmental issues associated with waste development, advising that particular consideration should be given to protection of groundwater, instability, landscape and visual impacts, nature conservation, conserving the historic environment, traffic and access, air emissions including dust, odours, vermin and birds, noise, light and vibration, litter and potential land use conflict. These matters are considered within the assessment of environmental impacts section of this report.

Air Quality, Pollution and Health Issues

465. Concerns relating to deterioration in air quality, pollution and associated health impacts are one of the main areas of concern raised through the planning consultation responses from the local community.
466. RLP Policy 39: Health Impacts of Development sets out that the potential for achieving positive health outcomes will be considered in the determination of proposals. Where any significant adverse impacts are identified, it is necessary to demonstrate how these will be addressed and mitigated. The policy also identifies that where applicable, proposals should promote, support and enhance health by (amongst others) providing employment developments in locations that are accessible by cycling and walking, retaining and enhancing accessible green infrastructure, and alleviating risks from unhealthy and polluted environments such as air, noise, water pollution and land contamination.
467. In considering these concerns it is important to have regard to the purpose of the waste planning system which is to assess whether proposals accord with the land-use and environmental policies set out in the relevant Development Plan and to address other material planning considerations. Separately, and independently, the facility is also subject to Pollution Prevention and Control legislation (PPC) which is administered by the appropriate regulatory Authority, in this instance the Environment Agency.
468. Government policy concerning air quality, pollution control and associated health issues is most clearly set out within the NPPF, the NPPW including its supporting planning practice guidance and the National Policy Statement for Energy EN-1. These advise:
- NPPF Paragraph 183 states that *'The focus of planning policies and decisions should be on whether proposed development is an acceptable use of land, rather than the control of processes or emissions (where these are subject to separate pollution control regimes). Planning decisions should assume that these regimes will operate effectively. Equally, where a planning decision has been made on a particular*

development, the planning issues should not be revisited through the permitting regimes operated by pollution control authorities’.

- NPPW Paragraph 7 states that waste planning authorities should consider ‘*the locational implications of any advice on health from the relevant health bodies. Waste planning authorities should avoid carrying out their own detailed assessment of epidemiological and other health studies*’, and ‘*concern themselves with implementing the planning strategy in the Local Plan and not with the control of processes which are a matter for the pollution control authorities. Waste planning authorities should work on the assumption that the relevant pollution control regime will be properly applied and enforced*’.
- Paragraph 5 of the Government’s Planning Practice Guidance on Waste encourages planning authorities to take advice from Environmental Health Officers, Public Health England and the Environment Agency on human health and air quality issues to test the suitability of a site for a waste development.
- Paragraph 4.13.5 of the National Policy Statement for Energy EN-1 confirms that the aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are generally subject to separate regulation (for example for air pollution) which provides for appropriate mitigation of impact so that it is unlikely that health concerns will either constitute a reason to refuse permission or require specific mitigation within the planning decision.

469. The design and operation of the EMERGE facility would be regulated by the Waste Incineration Directive (WID). WID requires adherence to specific emission limits for a range of pollutants and assessment criteria are set out in national air quality standards which set the objectives to be achieved.
470. The regulatory system for ensuring compliance with the WID is the Environmental Permitting system. The operator is required to apply for and obtain an Environmental Permit from the Environment Agency prior to commissioning the plant. A permit application was submitted for the EMERGE facility on the 13th August 2020.
471. The purpose of the Environmental Permit is to ensure that the plant is designed and can operate without damage to the environment or harm to human health resulting from pollution such as airborne particles and direct run-off from the facility and ensure that emissions from the proposed stack meet regulatory standards. In order to do this, a range of data including the chemical content of the emissions, local topography and climate are applied to a dispersion model to ensure that emissions disperse in all conditions taking account of local environmental conditions without any potential threat to health. The possible effects on sensitive vegetation and ecosystems and on the safety of surrounding farmland will also be examined. In reaching their decision on whether to issue an Environmental Permit for the operation of the facility, the Environment Agency uses a precautionary approach to ensure that:

- the applicant has demonstrated that the proposed facility meets the requirements of the Environmental Permitting Regulations and uses Best Available Techniques in its design and operation;
- the criteria set out in other relevant directives on air quality, urban waste water and dangerous substances have been met;
- the standards proposed for the design, construction and operation of the facility meet or exceed the Environment Agency's guidance, national legislation and relevant directives;
- the comments received from the public and statutory consultees have been taken into account;
- as far as practicable, the energy generated by the CHP plant will be recovered for use;
- the amount of residues and their harmfulness will be minimised and recycled where appropriate; and
- the proposed measurement techniques for emissions are in line with those specified in national legislation and relevant directives.

472. Potential health impacts are a material planning consideration, however these impacts should be assessed within the context of planning policy incorporated within the NPPF, NPPW and its supporting practice guidance. This policy clearly states that the planning decision should not duplicate pollution controls and should work on the presumption that the pollution control regimes will be properly applied and enforced. These pollution controls will regulate the process, its emissions and any potential adverse health impacts and in this context there is no requirement in making this planning decision for the planning authority to carry out its own detailed assessment of epidemiological and other health studies, subject to the planning authority having regard to any locational implications or advice received from the relevant health bodies.
473. The applicant's ES incorporates an assessment of potential air quality and human health impacts. It identifies that the main air quality effect would be as a result of process emissions from the stacks associated with the operation of the EMERGE facility and vehicle emissions during the construction and operational phases. An air quality assessment using dispersion modelling to industry standards has been undertaken to consider the magnitude and effects of process including vehicle emissions on the surrounding environment using a 'worse-case' scenario.
474. The assessment has shown that process emissions from the EMERGE facility are predicted to have a negligible effect on human health. It has also concluded that there would be no significant in-combination effects with emissions from the existing power station and the gas turbine facility at the site. The assessment has also shown that process from the EMERGE facility are predicted not to be at levels that could lead to significant adverse effects on the ecological features at the local SSSI, LNR or LWSs.

475. In terms of vehicle emissions associated with the transport associated with the construction and operation of the EMERGE facility, these emissions are not regulated through the Environmental Permit and therefore require consideration as part of the planning decision. The air quality assessment has assessed the level of emissions from transport associated with the construction and operation of the facility, confirming that the impact of vehicle emissions alone at all receptor locations would be 'negligible' irrespective of the total concentration for all pollutants considered and the in-combination impact of vehicle and process emissions at all receptor locations is 'negligible' for all pollutants considered.
476. It is therefore concluded that providing measures required by legislation are adhered to (i.e. compliance with the Environmental Permit), the significance of any impacts to air quality and health are considered to be 'negligible'. Since the EMERGE facility would be operated under an Environmental Permit, for the purposes of this planning decision the authority can be satisfied that its operation would be appropriately regulated to ensure that it meets air quality, pollution and health controls.
477. In accordance with the approach set out within paragraph 5 of the Government's Planning Practice Guidance on Waste, the Council has taken advice from the Environment Agency, Public Health England, Public Health Nottinghamshire County Council, and Rushcliffe's Environmental Health Department on human health and air quality issues to test the suitability of the site for waste development.
478. The Environment Agency has confirmed that the operation of the EMERGE facility will require a bespoke permit under the Environmental Permitting Regulations (England and Wales) 2016. They have confirmed that the permit will consider the level and safety of emissions to surface water, sewer and air. The planning consultation response defers the final judgement on the level of effects on air quality, pollution and health to the determination of the permit, but it does not raise any objections on these grounds.
479. Public Health England and Public Health Nottinghamshire County Council have provided a collective planning consultation response within which they reference research undertaken to examine suggested links between emissions from municipal waste incinerators and effects on health. This research shows that modern, well run and regulated municipal waste incinerators are not a significant risk to public health. The research acknowledges that whilst it is not possible to rule out adverse health effects from incinerators completely, any potential effect for people living close by is likely to be very small with the effects of air pollutants on health. The research shows that incinerators make only a very small contribution to local concentrations of air pollutants. Public Health England and Public Health Nottinghamshire County Council therefore do not raise any air quality, pollution or health objections to the proposed development and its location, but they encourage the planning authority to contact the local authority public health team for matters relating to wider determinants of health associated with this development including reducing public exposures to non-threshold

pollutants (such as particulate matter and nitrogen dioxide) below air quality standards, address inequalities in exposure, and maximise co-benefits (such as physical exercise).

480. Rushcliffe Borough Council's Environmental Health Officer has reviewed the air quality effects of the development and its methodologies and does not raise any objections to the facility's emissions or the location of the development.
481. The public's concerns or perceptions in relation to health and air quality are also capable of being material considerations. However, in order for them to carry significant weight within the planning decision there would need to be reliable evidence to suggest that perceptions of risk are objectively justified, i.e. that the operation of the plant actually does pose an actual risk. This approach is evidenced by planning case law (in *Gateshead MBC v Secretary of State for the Environment*) which indicates that if public concern could not be objectively justified then it could not constitute a material grounds for a refusal of planning permission.
482. It is therefore concluded that the waste planning authority has taken appropriate technical advice to satisfy itself that the operation of the facility and its location would not result in any significant air quality, pollution or health impacts. Taking into account the advice in the NPPF and NPPW, its supporting practice guidance and EN1, the planning authority must assume that the pollution control regime will operate effectively and the evidence before the planning authority is that the operation of the EMERGE facility would not result in any significant air quality, pollution or health impacts.
483. In the context of the compliance with RLP Policy 39, since it is concluded that the development would not result in a significant adverse impact on health which is the primary emphasis of the policy, but there would also be no significant adverse impact from air, noise, water and land pollution, and the site is accessible to green infrastructure (demonstrated later in the report), the proposed development is considered to accord with this policy.

Highway Considerations

484. National planning policy in relation to sustainable transport is set out within Section 9 of the NPPF. NPPF paragraph 108 advises that when assessing planning applications opportunities should be taken to promote sustainable transport modes, ensure development sites have safe and suitable access for all users and where there are any significant impacts on the transport network in terms of capacity, congestion or highway safety these should be cost effectively mitigated to an acceptable degree. NPPF paragraph 109 states that development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

485. The Development Plan incorporates a series of planning policies consistent with the approach set out within the NPPF, seeking to ensure development proposals are served by appropriate access arrangements but also promote sustainable transport methods. The key policies are summarised below:
- WCS Policy 11: Sustainable transport confirms that all proposals should seek to maximise the use of alternatives to road transport (such as rail) in order to minimise the use of less sustainable forms of transport. It also identifies that proposals should also seek to make the best use of the existing transport network and minimise the distances travelled in undertaking waste management
 - WLP Policy W3.14: Transport states that planning permission will not be granted for a waste management facility where the vehicle movements likely to be generated cannot be satisfactorily accommodated by the highway network or would cause unacceptable disturbance to local communities.
 - WLP Policy W3.15: Transport encourages the use of regulatory controls within planning permissions to control the routing of lorries on the public highway and where necessary negotiate planning obligations to secure improvements to the public highway.
 - WLP Policy W3.16: Bulk Movement encourages the transport of waste by rail, barge, pipeline or conveyor where it will result in an overall environmental benefit.
 - RCS Policy 14: Managing Travel Demand gives priority when selecting sites for new development to identify locations which are or can be made accessible by walking, cycling and public transport. Where accessibility deficiencies exist, these will need to be fully addressed. In all cases severe highway impact which could compromise the effective operation of the local highway network and its ability to provide sustainable transport solutions or support economic development should be avoided.
 - RLP Policy 1: Development Requirements states that planning permission will be granted for new development subject to a suitable means of access being provided to the development without detriment to the amenity of adjacent properties or highway safety and the provision of parking is in accordance with advice provided by the Highways Authority (as part of a series of criteria).
 - RLP Policy 16: Renewable Energy identifies that proposals for renewable energy schemes will be granted planning permission where they are acceptable in terms of (amongst a series of criteria) "vehicular access and traffic."
486. The planning application is supported by a Traffic Assessment (TA) document which incorporates a quantified assessment of the traffic generated by the development, reviews the existing road network capacity, safety and general site accessibility and the network's suitability to

accommodate the projected traffic levels. The TA considers both construction and operational traffic.

487. The wider power station site is served by two vehicular accesses. The main entrance to the northern part of the power station site is at the south-western corner of the site, by way of an unnamed road which provides a connection, via a grade separated interchange, to the A453. A second access located at the south-eastern end of the power station site for heavy goods vehicles (HGVs) is via a further grade separated junction (known as the 'West Leake Junction') off the A453 on to Barton Lane, which is signed as the Power Station HGV entrance. The TA identifies that access to and from the application site to the wider highway network would be taken via the south-eastern power station HGV entrance.
488. The TA notes that during the construction works and for a period of nine months following its opening the EMERGE facility would operate alongside the power station. After this period the power station would close. The TA therefore has modelled the traffic-related environmental effects of the development on the basis of the following scenarios:
- Construction Phase (2023) based on background network traffic (including trips generated by the Power Station) + growth + trips associated with any committed developments;
 - Operational Phase (2025) based on background network traffic (including trips generated by the Power Station) + growth + trips associated with any committed developments; and
 - Operational Phase (2030) based on background network traffic (excluding trips generated by the Power Station) + growth + trips associated with any committed developments.
489. In terms of construction traffic, the number of vehicle trips would fluctuate throughout the construction phases with the peak period anticipated to be month 21 when there would be 361 vehicles accessing the site equating to 722 two-way trips each day. The TA examines the effects on the road network of this peak month using the Institute of Environmental Management & Assessment (IEMA) screening thresholds. The threshold identified in the IEMA standards for potential significant traffic impacts to occur is a 30% increase in existing traffic flows. The traffic assessment for the construction period is set out in the table below.

Link	Site Description	2023 Baseline Flows (vehicles)		Development Trips		% Increase	
		Vehicles	HGVs	Vehicles	HGVs	Vehicles	HGVs
1	A453 between M1 and Western Access	37,428	3,578	650	128	2 %	4 %
2	A453 between Western and Eastern Access	36,984	3,567	650	128	2 %	4 %
3	A453 east of Eastern Access	33,283	3,244	72	14	0 %	0 %
4	A453 south of Crusader Roundabout	32,926	3,242	72	14	0 %	0 %
5	A453 north of Crusader Roundabout	39,311	3,484	72	14	0 %	0 %
6	Eastern Site Access Road, north of Barton Lane	214	40	722	142	338 %	359 %
7	Hartness Road, north of Crusader Roundabout	2,064	72	0	0	0 %	0 %
8	Clifton Lane, south of Crusader Roundabout	7,906	308	0	0	0 %	0 %

490. The table confirms the changes in overall daily vehicle trips during construction of the proposed development are well below the Institute of Environmental Management & Assessment (IEMA) Rule 1 30% threshold, with the exception of Link 6, the Eastern Site Access Road, north of Barton Lane.
491. An examination of Link 6 in greater detail identifies that it would experience increases of 338% for light vehicles and 359% for HGVs. This is because the junction is currently lightly utilised and therefore the increases proposed within this planning application are large in the context of existing traffic flows. However, when the actual numbers of vehicles proposed are considered in relation to the design capacity of the junction it is concluded that the vehicle numbers proposed in this planning application are comfortably within the junction's design capacity meaning that the junction would continue to work with significant spare capacity and without resulting in any driver delay.
492. The level of trip generation connected with the operational phase of the EMERGE facility has been calculated using a worse-case scenario based on the facility receiving a maximum 524,550 tonnes of waste per year delivered to the site by road. Using a 'first principles' approach the traffic data calculates the average number of vehicles accessing the site on a weekly, daily and hourly basis based on vehicle carrying capacities. The predicted level of daily trips is set out in the table below (since each trip involves a vehicle entering and departing the site, the number of actual vehicle movements each day would be double this figure).

Trip Element	Trips (two-way)
HGV Trips	
Import of Waste	236
Import of Consumables	2
Export of Ash and Recovered Metals	71
Total HGV Movements	309
Car Trips	
Shift Staff	64
Day Staff	26
Visitors	10
Total Car Trips	100
Total Trips	
Total Trips	409

493. The vast majority of vehicle movements associated with the development would occur during weekdays over the 14-hour period between 06:00 and 20:00, but there would be some fluctuation in traffic numbers throughout the working day with it being assumed that the maximum traffic flow would be in the AM peak hour (7-8AM) when there would be 45 HGV and 23 Light vehicle movements. Outside of the peak hours the number of HGV movements vary, but generally sit somewhere in the region of 30 movements per hour. In terms of the distribution of this traffic on the local highway network, the applicant considers the following spread is realistic.

Route	Car	HGV
A453, south-west to M1 Motorway	42 %	81 %
A453, north-east towards Nottingham	41 %	19 %
West Leake Lane	17 %	0 %
Total	100 %	100 %

494. The traffic projection for 2025 is relevant to a time limited period of around 9 months when the EMERGE would operate alongside the power station until its closure. For the purposes of considering the transport effects of the development the 2030 projection of transport effects provides a more realistic assessment of vehicle numbers on the highway network through the longer-term operational life of the facility and therefore has been examined in greater detail. The results of this assessment are identified in the table below:

Link	Site Description	2030 Flows (vehicles)		Development Trips		% Increase	
		Vehicles	HGVs	Vehicles	HGVs	Vehicles	HGVs
1	A453 between M1 and Western Access	38,926	3,749	294	252	1 %	7 %
2	A453 between Western and Eastern Access	38,687	3,740	294	252	1 %	7 %
3	A453 east of Eastern Access	34,800	3,400	99	58	0 %	2 %
4	A453 south of Crusader Roundabout	34,424	3,398	99	58	0 %	2 %
5	A453 north of Crusader Roundabout	41,147	3,652	99	58	0 %	2 %
6	Power Station Access Road, north of Barton Lane	225	42	409	309	182 %	743 %
7	Hartness Road, north of Crusader Roundabout	2,174	75	0	0	0 %	0 %
8	Clifton Lane, south of Crusader Roundabout	8,325	324	0	0	0 %	0 %

495. The table shows that during the operational phase in 2030, the changes in overall daily vehicle demands of the proposed development are well below the Institute of Environmental Management & Assessment (IEMA) Rule 1 30% threshold on all links except for Link 6, the Eastern Site Access Road, north of Barton Lane. The changes for the 2025 scenario which includes an assessment alongside the traffic associated with the operation of the power station are shown to have a similar magnitude of effect. For the reasons explained previously, the higher percentage increase in vehicle numbers using link 6 is considered appropriate in the context of the design capacity of this junction.
496. Given the development's proximity to the A453, traffic associated with the development will primarily utilise this road. The A453 is a main distributor route within the County which is designed and maintained to accommodate traffic distribution over the wider regional area. It is therefore entirely appropriate for the traffic associated with the EMERGE facility to utilise this road and its use ensures that the traffic impacts of the development on the wider road network are expected to be very limited. Whilst light traffic (primarily cars) would use West Leake Lane south towards Kingston/Kegworth, no HGVs would use these rural roads. The calculation that 17% of all light traffic would travel along this route represents a very low number of light vehicles spread over the working day ensuring that the magnitude of impact from the additional light vehicles on this route is considered to have a negligible effect.
497. The TA incorporates a detailed analysis of recent accident data which shows that the highway network in the vicinity of the power station has a low

accident rate and there are no clusters of accidents that could be evidence of accident 'hotspots'. The TA also demonstrates that potential risks of increased driver delays from additional traffic from the development significantly adding to congestion on the highway network are deemed to be negligible.

498. Consultation advice has been taken from both NCC's Highways Development Control Manager and Highways England who do not raise objections to the highway implications of the development.
499. Overall it is concluded that the roads serving the development are of an appropriate standard and their use would not result in any significant adverse road safety or traffic amenity impacts and therefore the development is considered to be compliant with WLP Policy W3.14 and the highway section of RLP Policy 1.
500. Planning conditions and a Section 106 obligation to control lorry routeing is recommended to control the potential adverse impacts from traffic associated with the development.
501. With regard to the numbers of HGVs accessing the site, the highway network serving the site is readily capable of accommodating the average daily weekday flow and arguably many more vehicles without resulting in significant traffic amenity, highway capacity or road safety issues. A planning condition to regulate the maximum number of delivery vehicles is not considered necessary in this instance.
502. Planning permission is sought to allow waste deliveries to be undertaken on a 24 hours, 365 days per year basis, although in practice the applicant states that most HGV movements would occur during weekdays between 07:00 and 17:00 (97% of overall deliveries). The location of the site which is served directly from a dual carriageway and remote from sensitive residential property ensures that any deliveries undertaken during the evening and night-time would not give rise to any significant impacts in terms of highway capacity or traffic amenity issues. Noise controls imposed on the wider operation of the EMERGE facility would regulate the level of noise from any evening and night-time deliveries within the site itself.
503. In terms of the provision of off-street car parking, a total of 43 employee and visitor car parking spaces (including 3 accessibility and 3 electric vehicle charging spaces) are provided as proposed, but the construction of the car park also includes a first fit wiring network to enable all the parking spaces to be electrified, thus future proofing the car park design.
504. In terms of HGV routeing, WLP Policy W3.15 encourages the use of planning conditions or obligations regulated through Section 106 legal agreements to ensure that delivery traffic uses suitable roads. Concerns have been raised by local residents that the delivery vehicles will travel along the network of country roads in the area with potential to adversely affect road safety and disturbance to the rural communities.

505. The planning application site benefits from direct access to the A453 and in turn the M1 and thus has excellent connectivity to the strategic road network. There is considered to be very little reason why HGV's would travel along less suitable rural roads in the area and therefore ensuring delivery traffic uses the A453 for access and not the other rural roads in the areas should be self-regulating.
506. It is acknowledged that the EMERGE facility generates high volumes of delivery traffic and thus it is considered appropriate to take a robust approach to regulate lorry routing through a Section 106 legal agreement to ensure there is an appropriate legal mechanism to manage the delivery routes used by HGVs and ensure that drivers only access the site from the A453 (Remembrance Way) and restricting HGV access to the facility via Farnborough Road and Green Lane through Clifton; Nottingham Road, Gotham; West Leake Lane and Kegworth Road which connect from the A453 through to more rural road networks. The suggested routes to be precluded are identified on Plan 9.
507. The lorry routing agreement would utilise a variety of controls including the erection of signage, issuing of delivery instructions, active monitoring of the highway network and a system of fines and penalties for drivers who do not follow the approved routes and would ensure that disturbance to surrounding communities from transport associated with the development is minimised.
508. Residents have raised concerns that there may be occasions when there are accidents and other incidents on the road network which result in road closures and potential for traffic to be diverted onto rural roads with potential for disturbance and disruption. Whilst this potential is acknowledged, these road closures are infrequent and comparatively short in their duration and in all other respects the development benefits from excellent connectivity to the strategic highway network. The S106 agreement however would provide regulatory control to stop the more opportunistic 'rat-running' that otherwise could occur by drivers.
509. Whilst it has been demonstrated that the predicated traffic movements can safely be accommodated in the context of the wider highway network, a key test of transport policy within the NPPF, WCS Policy 11, WLP Policy W3.16 and RCS Policy 14 is that the development promotes sustainable transport modes.
510. The planning application assumes all waste imports and processing materials would be delivered to the EMERGE facility by road. This is despite the Power Station site incorporating its own railway sidings which connect into the East Midlands mainline and provide potential for rail deliveries to occur. Whilst acknowledging the availability of this off-loading infrastructure, to enable it to be used residual waste must first be loaded onto trains at rail-linked waste transfer facilities. Rail-linked waste transfer stations have generally been developed within a framework of long-term Local Authority waste contracts (for example, the Greater Manchester contract) where the combination of scale, distance and contract duration have made the development of such

infrastructure economically feasible. Due to a combination of feasibility issues and road transport providing greater operational/commercial flexibility, most of the waste in the UK is transported by road, a fact acknowledged within WCS paragraph 7.51 which supports Policy WCS 11.

511. It is acknowledged that the applicant is not able to commit to rail delivery at the point of opening because waste contracts have been entered into at this stage. Notwithstanding this fact, it is important not to lose the availability of this rail unloading facility in future years and therefore it is recommended that as part of the Section 106 agreement a requirement is imposed requiring its retention throughout the operational life of the EMERGE development and to maintain an ongoing commitment to utilise rail transport where opportunities present themselves.
512. The development has been designed with features that would encourage the use of non-car modes of transport for staff transport. Although the options for staff to use public transport are limited, the development proposals include the provision of secure cycle parking for bicycles, staff shower, changing and locker facilities and the availability of staff food preparation areas to encourage staff to remain on-site during working hours, thus assisting in avoiding additional car journeys. It is recommended the provision of these facilities are regulated through planning condition. Sustainable staff transport should also be managed and encouraged through the wider travel plan, its implementation regulated by planning condition.
513. The overall objective of the sustainable transport policies is not to prohibit the transportation of waste by road, but its emphasis is to maximise the potential to use alternatives to road transport wherever possible where these provide a more sustainable outcome. The EMERGE facility incorporates design features to promote sustainable transport, particularly in terms of staff transportation but it does not utilise the more sustainable rail facilities for haulage. It is therefore concluded that the design of the EMERGE facility does not hinder compliance with sustainable transport policies incorporated in the NPPF, WCS Policy 11, WLP Policy W3.16 and RCS Policy 14. However, little weight can be given to any policy support for the development through these policies because there is no firm commitment to utilise the rail transport built into the planning application.
514. Minimising the distance waste has to travel for appropriate treatment is a key objective of the WCS and is one of the main reasons for focusing development in or close to our larger urban areas under WCS Policy WCS4. The proposed development is located 'close to' Nottingham and is therefore considered to be well placed to minimise the distances travelled in managing waste originating from the Greater Nottingham area.
515. However, it is clear that the EMERGE facility would also manage waste from a wider regional area of up to a two-hour drive raising questions as to whether the management of this waste does result in a reduction in travel distances. In practice, the EMERGE facility would operate as a merchant facility competing for waste alongside a network of similar facilities. The

availability of the EMERGE facility would provide additional recovery capacity in Nottinghamshire and wider area, increasing the network of available facilities and providing additional capacity to manage waste at a more local level, particularly to reduce the current levels of waste exports to Europe which is driven by a lack of UK capacity. The costs of transporting waste over a longer distance will inevitably mean that waste will be managed in one of the nearest facilities to where its produced. It is therefore concluded that the operation of the EMERGE facility can play a beneficial role in reducing the distance waste is transported but it is acknowledged that some of the waste processed in the facility will travel a considerable distance.

Landscape Assessment

516. The NPPF requires the planning system to protect and enhance valued landscapes, providing great weight to the protection to designated landscapes including National Parks, the Broads and Areas of Outstanding Natural Beauty and seeking to avoid major development within these designated landscapes. The proposed EMERGE facility is not located within a nationally designated landscape area.
517. Landscape protection policies within the development plan are provided within WLP Policy W3.25: The Countryside and Mature Landscape Areas. This policy seeks to protect mature landscape areas within Nottinghamshire from adverse impact as a result of waste development. However, since mature landscape designations within Nottinghamshire have been replaced by landscape character assessments, this policy has little relevance to the assessment of the planning application.
518. RLP Policy 1: Development Requirements identifies that planning permission for new development will be granted subject to meeting criteria including criteria 7 which seeks to ensure there are no significant adverse effects on landscape.
519. For the purposes of carrying out the landscape assessment the Environmental Statement has used a study area of 5km which is considered appropriate for a development of this scale and which includes several administration districts including the Rushcliffe Borough Council area of Nottinghamshire, the South Derbyshire District of Derbyshire and the North West Leicestershire District of Leicestershire.
520. The landscape character designations of the study area are summarised below:
 - At a national level the proposed site is situated at the junction of a number of National Character Areas (NCAs), NCA 48 Trent and Belvoir Vales, NCA 69 Trent Valley Washlands, NCA 70 Melbourne Parklands and NCA 74 Leicestershire and Nottinghamshire Wolds. The site is located predominately in NCA 74, with a small section of the Soar valley to the immediate west of the site in NCA 69.

- At a regional level the proposed site is similarly situated at the junction of a number of Regional Landscape Character types (RLCTs), sub section 3a Floodplain valleys of the RLCT 3 River Floodplain valleys, sub section 4a unwooded vales of the RLCT 4 Lowland vales, sub section 5b wooded village farmlands of the RLCT 5 Village Farmlands, and sub section 8a Clay Wolds of RLCT 8 Clay Wolds. The site is located in 8a Clay Wolds RLCT.
 - At a county level the proposed site is on the border of Nottinghamshire and Leicestershire which is demarcated by the River Soar in this area. Within Nottinghamshire the study area is divided into Landscape Character Types (LCT) which are further sub divided into Policy Zones. The site is at the boundary of the South Nottinghamshire Farmlands LCT, the Nottinghamshire Wolds LCT and the Trent and Soar Valley LCT. The proposed site is located predominately in Policy Zone Nottinghamshire Wolds 02 – East Leake Rolling Farmland, with a small section to the north, north east and east of the site in Policy Zone Nottinghamshire Wolds 01 – Gotham and West Leake Hills and Scarps.
521. Because the study area straddles three administrative boundaries and three separate local character assessments which are not consistent with each other, the landscape assessment has been made against the regional landscape character.
522. The EMERGE facility is anticipated to become operational approximately nine months prior to the closure of the Power Station. As such, it is necessary to separately consider the effects of the proposed development against two baseline scenarios, as follows:
- Firstly, the short period where the Power Station remains operational, and where all the existing structures remain present in the landscape, i.e. the 'Current Baseline'; and
 - Secondly, the period following the closure of the Power Station and the subsequent demolition of many of the existing structures, i.e. the 'Future Baseline'.
523. The Environmental Statement incorporates a detailed assessment of the effects of the proposed development upon landscape character and in summary are assessed as being not significant in terms of the EIA regulations.

Regional Landscape Character Type	Suscept. to change	Value	Sensitivity	Magnitude of change Current Baseline	Magnitude of change Future Baseline	Signif. of effect Current Baseline	Signif. of effect Future Baseline
RLCT 3a floodplain valleys	Low - medium	Medium	Medium	Negligible	Small - medium	Neg. neutral	Minor – moderate adverse
RLCT 4a Unwooded vales	Medium	Low - Medium -	Medium	Negligible	Negligible	Neg. neutral	Neg. neutral
RLCT 5b wooded village farmlands	Low	Low - Medium	Low	No change	No change	No effect	No effect
RLCT 8a Clay wolds	Low - Medium	Medium	Low - Medium	Negligible	Small - medium	Neg. neutral	Minor – moderate adverse

524. In the Current Baseline scenario, the applicant states that ‘any change in character would be negligible. The Proposed Development would be added to the existing Power Station and would represent a limited addition to this existing assemblage of prominent large-scale structures. The influence that structures at the Power Station site have upon the surrounding landscape would not materially change’.
525. In the Future Baseline scenario, the applicant states that ‘the removal of the majority of the existing structures would result in a beneficial change in character, reducing the long-standing influence of the Power Station upon its surroundings, although some existing structures would be retained, retaining the industrial character of the Power Station’. The presence of the proposed development would maintain the established influence of electricity generating infrastructure upon the landscape, albeit that this influence would be reduced from the current baseline. In terms of the effect of the development on each regional Landscape character types it is concluded:
- In RLCT 3A: Floodplain Valleys and RLCT 8a: Clay Wolds, the effects of the Proposed Development would be minor to moderate;
 - In RLCT 4a: Unwooded Vales, the effects would be negligible. As part of the Reg. 25 submission, the applicant has provided further comment to confirm the new stacks at 110m would be visible from this RLCT following the removal of the cooling towers;
 - 4a – unwooded vales. From this RLCT when the cooling towers have been removed the new stacks at 110m will be still be visible;
 - In RLCT 5b: Wooded Village Farmlands, the applicant states that ‘there would be no effect upon character in either baseline scenario. The RLCT is relatively distant from the Site and is strongly influenced by contemporary development within it (SEGRO Logistics Park and M1 motorway). The presence / absence of the Proposed Development would not change the existing character.’

526. The proposed landscape mitigation would consist of a perimeter hedgerow, areas of birch woodland underplanted with herbaceous perennial woodland species, a perennial meadow, a swale forming part of the site drainage system which would run through the woodland area, footpaths and benches to enable the area to be used for recreation by staff and visitors, a hedgerow along the access road adjacent to the eastern site boundary, and an area of land to the north to be planted as a small copse. The extent of proposed landscaping would in the context of the entire site be a relatively small proportion but would nevertheless represent an increase in vegetation cover. Because of the scale of the development, these landscape proposals will have no screening function and are biodiversity focussed.
527. It is therefore concluded that the development satisfies the requirements of RLP Policy 1 insofar that the development would not result in significant adverse impacts on the landscape.

Visual Impact

528. WLP Policy W3.3: Plant and Buildings seeks to minimise the visual effects of new waste developments through careful site design, particularly by consideration of the effect of the development on the skyline. The policy identifies a number of actions to reduce visual impacts from waste developments. These measures include the appropriate siting of facilities to avoid impacts to adjacent land, the grouping together of buildings on waste sites, keeping buildings as low as possible, and the use of appropriate cladding and colours to minimise visual impacts. WLP Policy W3.4: Screening seeks to ensure that waste developments are appropriately screened and landscaped to ensure visual impacts are minimised.
529. Government guidance contained within the Overarching National Policy Statement for Energy (NPS EN-1) is relevant insofar that it acknowledges that:
- ‘all proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites. The Infrastructure Planning Commission will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project.’*
530. The Environmental Statement incorporates a visual impact assessment which seeks to quantify the visual prominence of the EMERGE facility. It incorporates two baselines for the development, one representing the short period when the EMERGE facility would sit alongside the existing power station buildings and the second representing the post 2025 position which assumes many of the existing structures within the power station have been removed following its closure and therefore the EMERGE facility would no longer benefit from any potential screening these buildings may provide. The zone of theoretical visibility identifies relatively widespread visibility of the existing power station structures and the development across the study area

and so the development of the EMERGE facility would not be a case of introducing views of industry that were without precedent. The results of the visual assessment are set out below:

Viewpoint	Suscept. to change	Value	Sensitivity	Magnitude of change Current Baseline	Magnitude of change Future Baseline	Signif. of effect Current Baseline	Signif. of effect Future Baseline
1. Trent Lock	High	High	High	Small	Small	Minor adverse	Minor adverse
2. Footpath near Redhill Lock	Medium	Medium - high	Medium	Small	Small - medium	Minor adverse	Minor – moderate adverse
3. Mid shires way, Ratcliffe Lane	High	Medium - high	High	Negligible	Small - medium	Negligible Neutral	Moderate adverse
4. New Kingston	Medium-high	Medium	Medium - high	Small	Small	Minor adverse	Minor adverse
5. Kingston on Soar	High	Medium	High	Small	Small	Minor adverse	Minor adverse
6. Keyworth	High	Medium	High	Small	Small	Minor adverse	Minor adverse
7. River Trent, Sawley cut	High	Medium - high	High	Small	Small	Minor adverse	Minor adverse
8. Pasture Lane	Medium	Medium	Medium	Small	Small	Minor adverse	Minor adverse
9. Barton in Fabis	High	Medium-high	High	Small	Small	Minor adverse	Minor adverse
10. Bridleway Cottager's Hill	High	Medium	High	Small	Small	Moderate adverse	Moderate adverse

531. To summarise the magnitude of visual impact from the current baseline stage when all existing structures are still in place, viewpoint 10 has the largest significance of effect because the proposed development would be clearly visible and the spread of the development would be extended to the east. This is the one of the few viewpoints where this change is apparent, however the industrial nature of the view would not change. In other locations the existing structures screen the view or existing landform screens the view of lower structures (including the boiler house) and only the tall, narrow 110 m stacks are visible above the ridge line.
532. Following the clearance of the power station buildings post 2025 there would be a few locations from which the proposed EMERGE stacks would be visible where the retained gas turbines stack is not already visible. Focussing on these areas where there is additional visibility, these are located to the

north of the site, around Thrumpton, along a section of the River Trent, and at the eastern edge of the study area, from the countryside south and east of Gotham. There are residential properties and public footpaths located within this area, and as such, they are likely to have views of the proposed stacks post-2025, when other structures remaining at the Power Station are not visible. There would therefore be a limited increase in the extent of visibility post-2025 in a small number of locations. To summarise at the future baseline stage when some existing structures are removed:

- Viewpoint 2 - moderate – minor adverse significance of effect;
- Viewpoint 3 - moderate adverse significance of effect;
- Viewpoint 10 - moderate adverse significance of effect;
- Viewpoints 1,4,5,6,7,8, and 9 - minor adverse significance of effect.

533. For viewpoints 1,5,7,8, and 9, landform continues to screen the view of lower proposed structures with only the 110m stacks being visible, so there will continue to be a minor adverse visual impact. For viewpoints 4 and 6, as the taller structures are removed despite the presence of landform such as ridgelines, the top of the 49.5 m building will become visible, as well as the 110m stacks, but not to the extent that the effect increases from minor to moderate adverse. At viewpoint 2, there is no screening ridgeline so more of the building becomes visible which leads to the increase in visual effect from minor adverse to moderate adverse.
534. The construction phase will last for 36 months and effects will range in intensity and nature but will involve the use of cranes for half of the construction period. Lighting will be required for night time construction. This lighting would be seen in the context of the existing power station site which is already lit, as well as the A453 junctions and the East Midlands parkway station. Through the Reg. 25 response the applicant has provided further information on the level of visual effect of the cranes. The overall conclusion is that the construction stage will not lead to significant visual effects.
535. The combustion process would produce an emissions plume, composed primarily of water vapour, which would be emitted via the exhaust flues contained in the stack. The degree to which this plume is visible would be determined by the flowrate of the exhaust gases and atmospheric conditions with low temperature and low humidity resulting in increased plume visibility which occur more frequently in winter and consequently both plume length and visibility reduce in the summer months. The plume would likely be visible for between 22% and 27% of daylight hours and the plume would exceed 100m for between approximately 4% and 8% of daylight hours (including those periods when the plume is not visible). Where the emissions plume is visible, this would have potential to draw attention to the presence of the proposed development from the surrounding area, thereby increasing the influence of the new structures upon the views available. The overall presence of the emissions plume would not lead to significant adverse visual effects.

536. The EMERGE facility would be operational on a 24-hour basis and thus there is a need for lighting to ensure a safe working environment for operatives during the hours of darkness. The lighting design would aim to minimise the generation of obtrusive light beyond the site boundary with internal lighting designed to reduce the spillage of light outside the buildings themselves. It is recommended that the detailed design of the lighting scheme be regulated by planning condition. The proximity of the site adjacent to the existing power station and lighting close by along the A453 junctions, at East Midlands Parkway Station with more distant lighting notably around settlements, commercial development and along the corridor of the M1 means that the lighting would not be intrusive in the surrounding area. In the context of the future Baseline scenario, parts of the Power Station site would continue to be lit post-2025 thus ensuring the conclusions regarding the magnitude of impact from lighting would be similar.
537. The applicant has sought to address the objectives of WLP Policy W3.3 and W3.4 as far as practicable by selecting a location which has a pre-existing industrial character with buildings of substantial massing and height. Many of these structures will be retained following the demolition of the power station and these retained structures will assist with the integration of the EMERGE facility into the surrounding area.
538. It is acknowledged that due to the scale of the proposed EMERGE facility it would be impossible for it to be fully 'hidden', but the design of the building has sought to integrate it into the surrounding setting using a multi-height roof design to minimise the overall height of its main building and make its upper parts less visible from some of the surrounding area, avoiding more 'sculptural' roof designs which would make the building taller and less volumetrically efficient. The buildings would be grouped to provide enclosure of the plant and machinery and the use of darker colours at lower levels and lighter colours at higher level better blend the buildings with the ground and sky. The applicant has therefore sought to ensure the objectives of WLP Policy W3.3 are incorporated within the design although the size/mass of the buildings means that visual impacts from the development are unavoidable.
539. The development site incorporates limited landscaping comprising species-rich mown grassland and meadow, native woodland copse and a hedgerow which will assist in integrating the site into its immediate surroundings, but do not provide any screening of the development in the wider area due to the buildings massing and height. A planning condition is recommended to ensure the landscaping scheme is implemented in accordance with WLP Policy W3.4.
540. Visual impacts from more distant locations would be reduced by the presence of a wooded ridge to the north including Wood Hill and Wright's Hill which screen views from this direction, in particular from within the village of Thrumpton and the valley of the River Trent which are located on the much lower-lying land.

541. It is concluded that the EMERGE facility would have a negative visual impact, the magnitude of visual impact is assessed as not be significantly harmful (above moderate adverse). In the overall planning balance, the visual impact of the development must be considered as a negative effect to which moderate weight should be given, but Overarching National Policy Statement for Energy (EN-1) acknowledges that it is almost impossible to carry out a large infrastructure development such as the EMERGE facility without some level of visual impact and acknowledges that it is appropriate for the planning decision to balance any level of visual harm against the benefits of the project in the wider planning decision, which this report does within the conclusions section.

Design Assessment

542. Section 12 of the NPPF sets out the Government's planning policy in relation to achieving well designed places. Paragraph 124 confirms that good design is a key aspect of sustainable development and helps create better places in which to live and work to make development acceptable to communities. Paragraph 130 advises that permission should be refused for development of poor design.
543. There are a number of policies within the development plan which aim to achieve good design consistent with the approach set out in the NPPF:
- WCS Policy 15: 'Design of waste management facilities' identifies that all new waste management facilities should incorporate high standards of design and landscaping, including sustainable construction methods.
 - RCS Policy 10: 'Design and Enhancing Local Identity' incorporates a list of criteria to ensure that all new developments should aspire to the highest standards of design, including construction methods and materials, and these issues should be integrated into the development process at an early stage, along with consideration of community safety and sustainable access.
 - RLP Policy 1: 'Development Requirements' is a criteria-based policy which incorporates a requirement to ensure the scale, density, height, massing, design, layout and materials of the proposal is sympathetic to the character and appearance of the neighbouring buildings and the surrounding area and not lead to an over intensive form of development.
544. The planning application is supported by a Design Statement which appraises the application site, the context of the surrounding area and explains how this has informed the development of the design that it is appropriate to the context of the site, considering various design options and architectural solutions for the massing and architectural style of the buildings and wider site development and consideration of the materials, colours and finishes used within the external elevations of the buildings.

545. The scale of the proposed EMERGE facility makes it impossible to be fully 'hidden' and therefore the development has been designed to make a positive architectural statement whilst seeking to minimise the height and bulk of the buildings within the limits of the operational requirements of the process. The use of a range of cladding finishes and colour ensures that the proposed development is read as a family of buildings. The use of darker colours at lower levels and lighter colours at higher level better blend the buildings with the ground and sky, and the interruption of large wall surfaces with glazing and louvres helps break up the overall scale of the facility but also add visual interest. The twin stacks have been incorporated into the main building and are as simple and narrow as possible to minimise their visual effects.
546. The design statement submitted in support of the planning application demonstrates that the applicant has provided a high level of attention to the design of the building which is considered appropriate in the context of the wider power station site and its potential future redevelopment. The applicant confirms that they consulted the local community prior to the submission of the planning application about the design of the development, receiving no specific responses. The consultation and publicity responses received in connection with the planning application has not identified any significant concerns regarding the design of the development. Erewash Borough Council note that the proposal is of an acceptable contemporary design which would not intrude further than existing units on the Ratcliffe on Soar Power Station Site.
547. Sustainable construction methods would be regulated through the Construction Environmental Management Plan (CEMP) with waste generation and water use minimised as far as possible.
548. Based on the above, it is concluded that the EMERGE facility has been designed to a high standard, minimising the massing of the buildings and using a variety of materials and colours to add visual interest to the design and therefore satisfies the requirements of the NPPF, WCS Policy 15, RCS Policy 10 and RLP Policy 1 which aim to achieve good design within development.

Protection of Ecology and Biodiversity

549. Section 15 of the NPPF sets out Government's planning policy in relation to the conservation and enhancement of biodiversity. Paragraph 170 confirms that planning decisions should contribute to and enhance the natural environment by protecting sites of biodiversity value, minimise impacts and provide net gains for biodiversity.
550. There are a number of policies within the development plan which seek to protect ecology and biodiversity and are consistent with the approach set out in the NPPF.

- WLP Policy W3.23: Nature Conservation including Geological Sites seeks to protect designated ecological sites from adverse impact from waste development.
 - RCS Policy 17: Biodiversity seeks to increase biodiversity within the Rushcliffe area.
 - RLP Policy 1: Development Requirements requires (as part of a wider criteria list) that development does not result in significant adverse effects on important wildlife interests and where possible demonstrates net gains in biodiversity.
 - RLP Policy 16: Renewable Energy which supports granting planning permission for renewable energy development subject to there being no unacceptable ecology or biodiversity impacts (as part of wider criteria list).
 - RLP Policy 38: Non-Designated Biodiversity Assets and the Wider Ecological Network sets out that where appropriate, all developments will be expected to preserve, restore and recreate priority habitats and the protection and recovery of priority species in order to achieve net gains in biodiversity. Developments that significantly affect a priority habitat or species should avoid, mitigate or as a last resort compensate any loss or effects. It also identifies that in areas outside of the Biodiversity Opportunity Areas developments should, where appropriate, seek to achieve net gains in biodiversity and improvements to the ecological network through the creation, protection and enhancement of habitats, and the incorporation of features that benefit biodiversity.
551. The Environmental Statement includes a chapter covering ecology and nature conservation which gives consideration to the potential direct and indirect ecological effects of carrying out the development. NCC's Nature Conservation Leader has reviewed the applicant's ecological assessment and his consultation response has informed the consideration of ecological issues.
552. The application site is not designated for its ecological interest. The site has a low ecological value with almost 95% of the development site area being unvegetated incorporating sealed and unsealed hardstanding surfaces and some industrial buildings. Vegetation is limited to some emergent sparse grass on the aggregate substrate and a narrow strip of amenity grassland alongside the site access road. The application site, as part of the wider power station site, is bounded by a metal mesh electrified fence, which forms a significant barrier to the movement of terrestrial species into the application site. As a result, the habitats within the site is assessed as having little potential to support protected or notable species.
553. In terms of direct ecological impacts from carrying out the development, these are assessed as being very limited and relate to the potential for the site to support breeding Little Ringed Plover which is a Schedule 1 bird species. These species are opportunistic and are known to nest on unvegetated sites. To minimise the potential for any impact it is

recommended that if construction works were programmed to commence during the bird nesting season they should be preceded by a bird survey to confirm the absence of this species and any other ground nesting birds. In the event that breeding birds are identified, a method statement should be produced detailing how works will progress (which may include delaying their onset). A planning condition is recommended to ensure this approach is followed.

554. A Biodiversity Net Gain calculation has been carried out which demonstrates that, if delivered as proposed, the on-site landscaping and habitat creation would exceed the 10% net biodiversity gain requirement thus indicating that the natural environment following the development would be measurably better than beforehand. A planning condition is recommended to require the submission of a detailed landscaping scheme, to include species mixes, establishment methods and maintenance regimes to ensure this net gain is delivered.
555. In terms of the context of the site in relation to designated ecological sites in the wider area and the potential for indirect ecological effects, there are no Natura 2000 (European designated sites) sites within a 10 km radius of the development site. There is one Site of Special Scientific Interest (SSSI) (Lockington Marshes SSSI) and one Local Nature Reserve (LNR) (Forbes Hole LNR) within 2km of the development site. There are 40 Local Wildlife Sites within 2km of which two are within 1km of the development site. There are no ancient woodlands within 2km of the site.
556. The incineration process utilised within the EMERGE facility and exhaust emissions from transport would release chemicals to the atmosphere including oxides of nitrogen and ammonia. The airborne deposition of these chemicals has potential to impact soil chemistry, effectively acting as fertiliser to the soil. If significantly large enough quantities of chemicals are deposited on ecologically sensitive sites it can encourage the growth of vegetation (particularly invasive plants) with detrimental impacts to existing fauna and flora. The Environmental Statement supplemented by the Reg. 25 submission incorporates a detailed assessment of airborne deposition rates to surrounding habitats including local wildlife sites within 2km from the site and addresses concerns raised by Nottinghamshire Wildlife Trust that this had not been undertaken in the original submission.
557. The applicant's ecological interpretation of air quality assessment states that *"it can be safely concluded that there will be no ecologically significant effects as a consequence of emissions to air from the Proposed Development"*, and more specifically that *"no impacts in excess of screening thresholds are predicted at Lockington Marshes SSSI, the only nationally important statutory designated site in a 2 km radius of the Proposed Development"*. Natural England concur with this conclusion, confirming in their planning consultation response that they are satisfied the proposed development will not damage or destroy the interest features of Lockington Marshes SSSI.

558. The air quality assessments also confirms that *“Two woodland LWSs [Gotham Hill Woods and Thrumpton Park] are predicted to experience small magnitude exceedances of screening thresholds for nitrogen deposition. Forbes Hole LNR, and one LWS [Meadow Lane Carr], is predicted to have a small magnitude process contribution to acid deposition, around or just above the 1% screening threshold. These impacts are not likely to have a measurable ecological effect, and cannot be regarded as significant in EIA terms, or significant in terms of the policy protection accorded to locally designated sites in the NPPF”*.
559. The applicant’s assessment also notes that *“The closure of the coal-fired Power Station is likely to result in a net reduction in nitrogen and acid deposition rates at nature conservation sites in the vicinity of the Proposed Development. This provides further certainty that there would be no adverse ecological effects as a consequence of emissions from the Proposed Development”*.
560. On the basis of the above, it is concluded that there will be no ecologically significant effects as a consequence of emissions to air from the proposed development and therefore no further ecological mitigation measures are identified as being necessary in respect of emissions and their effect on air quality within ecological habitats.
561. The potential for indirect effects from the construction and operation of the EMERGE facility and their effect on surrounding ecological receptors have been assessed and the following conclusions reached:
- The risks of human activity causing disturbance to species within adjacent habitats is assessed as being negligible due to the distance and intervening vegetation.
 - Given the distance to the nearest sensitive habitat (Thrumpton Park LWS) it appears unlikely that this would be affected by light spill during both construction and operation works. It is recommended that the design and layout of the lighting scheme are regulated by planning condition to ensure they comply with The Institute of Lighting Professionals (2018) Guidance Note 08/18 – Bats and artificial lighting in the UK (but see below).
 - Noise impacts during the construction and operational phases have been assessed. The Reg. 25 submission incorporates supplementary data on the potential for sudden noise during construction works, demonstrating that these would not result in any significant harmful effects due to their temporary duration, the fact that they are not dissimilar to the magnitude of existing noise emissions from the power station, the noise attenuation provided by the topography of the site, and the fact that woodland birds are less sensitive to noise emissions.
 - Operational noise does not appear to be of particular concern, with no part of the nearest LWS predicted to experience noise levels in excess of 50dB LAeq.

- The northern boundary of the application site is formed by a tall hedgerow (beyond the security fence) with an arable field beyond that, whilst to the east is a relatively extensive area of plantation woodland, scrub and rough grassland which have potential for commuting/foraging and roosting bats (the latter in the woodland edge) and protected species which could potentially be affected by disturbance from artificial lighting during construction and operation. A supplementary assessment of artificial lighting impacts provided through the Reg. 25 submission confirms that the applicant would design their floodlighting scheme to angle and shield lighting and minimise light spill to the woodland edge thus minimising the potential for adverse impact, confirming that these details would be provided by a submission made by planning condition. The approach suggested by the applicant is considered appropriate to ensure adverse ecological impacts from artificial lighting does not occur.
- Natural England's planning consultation response has confirmed that the development will not result in any significant adverse impacts to any designated Sites of Special Scientific Interest (SSSI) including the Lockington Marshes SSSI which is within the 2km impact risk zone. Attenborough Gravel Pits SSSI is outside the 2km impact risk zone. The habitat contains W6 alder habitat (stinging nettle woodland) which is not sensitive to nitrogen deposition. In terms of the wet grassland habitats within the SSSI, the design height of the chimney provides satisfactory dispersion and dilution of emissions to ensure the levels of nitrogen deposition from the process are below the 1% screening threshold and avoid adverse impact.

562. The Reg. 25 response reviews concerns raised by Nottinghamshire Wildlife Trust in their planning consultation that the ecological survey work does not provide a full assessment of the ecological effects of the development. The Reg. 25 response justifies the approach taken in assessing the ecological effects, noting that the ecological conditions of the development site are quite unique insofar that it is located within an operational power station surrounded by an electrified perimeter fence which effectively excludes terrestrial wildlife entering the site. Sudden noise impacts which could potentially impact birds nesting in the woodland area immediately outside the power station boundary are considered to be of a similar magnitude to the existing levels associated with the operation of the power station and therefore adverse impact are not anticipated. The applicant has also confirmed that the air quality assessment and its implications to nearby ecological receptors has been undertaken in accordance with industry standard and therefore its conclusions are reliable.

563. Whilst Nottinghamshire Wildlife Trust have expressed some ecological concerns regarding the development, the professional advice from NCC's Ecological Officer is that the ecological effect of the development has been appropriately investigated, mitigated and compensated and significant adverse ecological impacts would not result from the development of the EMERGE facility.

564. It is therefore concluded that the development would not result in any significant ecological effects and the planning application meets the relative policy tests in connection with ecology incorporated within the NPPF, WLP Policy W3.23, RCS Policy 17 and RLP Policies 1, Policy 16 and Policy 38, subject to the imposition of planning conditions to mitigate and compensate the ecological effects.

Built Heritage

565. Paragraph 193 of the NPPF states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Paragraph 194 states that any harm to or loss of the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Paragraph 195 states that where a proposed development will lead to substantial harm to a designated heritage asset planning permission should be refused unless it can be demonstrated that the substantial harm is necessary to achieve substantial public benefits that outweigh the harm. Paragraph 196 states that where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use. Paragraph 197 states the effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application.
566. Policies within the development plan generally support the approach set out within the NPPF, wherein it is noted:
- WLP Policy W 3.28 'Listed buildings and conservation areas' identifies that development which would harm the character, appearance, condition or setting of Conservation Areas, Listed Buildings, and Historic Parks and Gardens will not be permitted.
 - RCS Policy 11 'Historic Environment' seeks to conserve and / or enhance the historic environment, heritage assets and their setting.
 - RLP Policy 28 'Conserving and enhancing Heritage Assets' confirms that proposals affecting heritage assets will be required to demonstrate an understanding of the significance of the assets and their settings; identify the impact of the development upon them; and provide a clear justification for the development in order that a decision can be made as to whether the merits of the scheme bring public benefits which decisively outweigh any harm arising from the proposal.
567. The application site comprises an area of hardstanding which is not specifically identified as being a heritage asset. However, the application site forms part of the wider power station complex which is identified as being of

local heritage importance. Historic England has inspected the power station and confirmed it does not meet the criteria to become a listed building.

568. The Environmental Statement incorporates a cultural heritage chapter which references the NCC's Historic Environment Record (HER) as well as records at Erewash Borough Council, Rushcliffe Borough Council and North West Leicestershire District Council to identify features of historic interest within a 3km radius. This data shows:
- Seven Scheduled Monuments are located within the 3 km Study Area;
 - Fifty-eight Listed Buildings are located within the 3 km Study Area. Six of these are Grade I and II* Listed Buildings;
 - Four Conservation Areas lie completely, or partially, within the 3 km Study area;
 - Grade II Registered Kingston Park Pleasure Gardens lies within 3km of the site.
569. The heritage assessment has been reviewed by NCC's Historic Buildings Senior Practitioner who initially identified some concern in relation to the assessment of heritage impact in relation to Thrumpton Conservation Area, the setting of the non-designated heritage asset of the power station, impacts to heritage assets from noise and smell, effects on the setting of Thrumpton Hall Historic Parkland, effects on the setting of Trent Lock Conservation Area, Holy Trinity Parish Church, Ratcliffe on Soar and the Parish Church in Barton in Fabis, and consideration of traffic impacts in Kingston upon Soar. These supplementary assessments have been provided as part of the formal Reg. 25 response. The Environmental Statement supplemented by the Reg. 25 information incorporates a full assessment of the effect the development would have on the heritage assets of the area in accordance with the requirements of NPPF paragraph 189.
570. The assessment identifies that the effects of the construction and operation of the EMERGE facility upon the setting of heritage assets (both designated and non-designated) would range from negligible adverse to minor adverse impacts and constitute less than substantial harm to the significance of the heritage assets.
571. The proposed EMERGE facility has the greatest impacts on the setting of surrounding heritage through the visual intrusion of the tallest element of the facility (the chimney) on surrounding views. These include views out of Thrumpton Conservation Area, from Thrumpton Hall (both designated heritage assets) and from within the parkland associated with Thrumpton Hall (a non-designated heritage asset). There is also an impact on views from the historic village of Barton-in-Fabis (which is not a designated conservation area) and there will be glimpsed views of the new facility from the parish church at Ratcliffe on Soar. To the north of the river Trent, including from within the conservation area at Trent Lock, there are very clear views of the power station site (these were identified as negative at the time of designating the conservation area by Erewash BC). The additional impact of

the EMERGE facility will add to this negative impact on views across the river from the north. Although these are harmful impacts on the setting of designated and non-designated heritage assets, individually each of these constitutes less than substantial harm.

572. One aspect of the long-term impacts from the development on the heritage assets of the area is the decommissioning and removal of two cooling towers which form part of this development proposal. The coal-fired power station is a non-designated heritage asset and the cooling towers form an important part of this power station complex. The removal of these cooling towers will cause substantial harm to the significance of the power station heritage asset. NPPF paragraph 197 confirms that effects on non-designated heritage assets should be taken into account in determining the application, requiring a balanced judgement to be taken having regard to the scale of any harm or loss and the significance of the heritage asset.
573. Historic England has inspected the power station and confirmed it does not meet the criteria to become a listed building. Nevertheless, it is acknowledged that the scale of harm from the demolition of the cooling towers is significant. The planning policy test incorporated within NPPF paragraph 197 sets out a lower level of protection for this non-designated heritage asset than would otherwise be the case if the structure was listed, confirming that effects on non-designated heritage assets should be taken into account in determining the application, but requiring a balanced judgement to be taken having regard to the scale of any harm or loss and the significance of the heritage asset. There is an essential policy requirement for the two cooling towers to be demolished to satisfy Green Belt policy and therefore whilst acknowledging the scale of harm from the demolition of these structures, there are clearly identified benefits from their removal which on a balanced judgement of the planning merits argue in favour of granting planning permission.
574. NPPF paragraph 198 states that planning authorities should not permit the loss of a heritage asset without taking all reasonable steps to ensure the new development will proceed after the loss has occurred. In this respect, the construction timetable for the EMERGE facility ensures that the cooling towers will not be demolished before the facility is constructed, thus ensuring compliance with the requirements imposed under NPPF paragraph 198.
575. NPPF paragraph 199 advises that planning authorities should require developers to record and advance understanding of the significance of any heritage asset to be lost (wholly or in part and to make this evidence (and any archive generated) publicly accessible. As part of the suggested planning condition which links the demolition of the cooling towers to the development of the EMERGE facility it is recommended that there is an obligation to record the heritage asset of the cooling tower structures. This would be carried out by using visual information, a descriptive record and analytical data including the use of drawings to identify the cooling towers' location, age, history, materials, dimensions and use, recorded by a suitably qualified and experienced professional. The heritage record should be submitted to the

Planning authority in the form of a written report and approved in writing and made publicly available including entry onto the Historic Environment Record held by Nottinghamshire County Council prior to the cooling towers demolition.

576. Overall, the proposals are considered to have some harmful impacts to the heritage assets of the area, but the magnitude of this impact is considered to be less than substantial. The Planning (Listed Buildings and Conservation Areas) Act 1990 requires the planning authority to have special regard to any heritage impacts and any harm should be given considerable importance and weight which creates a negative presumption. Having done so and having regard to the duty under the Listed Building Act, paragraph 196 of the NPPF provides scope to weigh the public benefits of the proposal against the impacts to the historic environment which are less than substantial. Consideration of this balance is provided within the conclusions section of the report.

Archaeology

577. WLP Policy W3.26: 'Archaeology' identifies that where nationally important archaeological remains (whether scheduled or not), and their settings are affected by a proposal, there will be a presumption in favour of their physical preservation in situ. In terms of archaeological remains of less than national importance planning permission will only be granted where there is an overriding need for the facility and where provision is made for the excavation and recording of the remains. The approach is generally consistent with RLP Policy 29: Development Affecting Archaeological Sites.
578. Chapter 13 of the Environmental Statement incorporates an archaeological assessment of the development site. This confirms that the archaeology of the area is complex. Close to the Power Station is the site of a Roman temple, scheduled as an ancient monument, and overlooking the Redhill Marina at the confluence of the Rivers Trent and Soar. Archaeological work in anticipation of the potential development and extension of the Marina as well as on the East Midlands Parkway demonstrated extensive Roman urban occupation extending at least as far as the perimeter of the Power Station. There were sketchy and difficult to locate reports of Roman remains including human remains which were discovered during initial works on the construction of the Power Station and this Roman occupation probably extended to at least the North west portion of the Power station site.
579. However, since the power station's construction in 1960s there has been significant earthmoving and repeated phases of different development and it is to be expected that this will have removed much of the archaeology, but as parts of the site have also been built up with imported material, it is also conceivable that islands of buried archaeology remain.
580. As an extension of the scheduled site to the west such survivals could be of significance, not least because their presence would demonstrate just how

large the area of Roman urban occupation was. NCC's Archaeology Senior Practitioner considers the applicant's archaeological consultants have done an excellent job of utilising existing geotechnical information to develop a deposit model for the development site which confirms that there is indeed a possibility that islands of archaeological deposits may survive. They note that the deep deposits of "made ground" identified in the existing borehole information might include archaeological deposits which the personnel logging the information reasonably might not have identified. They have proposed that there should be archaeological monitoring of a programme of geotechnical investigation, and that this work should be required as a condition of any planning consent. They have further recommended that if archaeological deposits are identified in this work, this should be subject to appropriate levels of archaeological mitigation so as to achieve a good archaeological record, and therefore better understanding of the overall Roman landscape.

581. The approach proposed to regulate the investigation and recording of the archaeology across the development site should be regulated through the imposition of a pre-commencement condition requiring a programme of geotechnical work, including provision for paleoenvironmental work and scientific dating, to be undertaken in accordance with a written scheme of archaeological investigation and mitigation work.
582. In terms of the geotechnical works, these would be undertaken as part of ground investigation work to provide further assurances regarding potential levels of ground contamination underlying the site. It is recommended that these intrusive geotechnical investigations in the south of the site are subject to archaeological monitoring regulated by planning condition requiring the results to be reviewed by a geo-archaeologist to allow for the archaeological assessment model for the site to be updated accordingly.
583. In terms of the implementation of a programme of archaeological mitigation work, if the results of geotechnical works confirm that modern made ground deposits extend across the site, then no further archaeological works would be advised. If geotechnical works indicate potential for undisturbed deposits, it is recommended that an archaeological evaluation is undertaken across a representative proportion of the southern half of the site to establish the extent of any surviving archaeological remains that might be damaged during construction of the proposed development. This would enable identification and preservation by record of any unrecorded archaeological remains. Following the completion of the evaluation, residual effects upon the potential archaeological assets within the site would be considered.
584. The applicant's approach to managing any archaeological constraint within the site is considered appropriate in the context of WLP Policy W3.26 and RLP Policy 29 and the development may proceed subject to appropriate further investigatory works and recording of any archaeological finds secured through planning condition.

Noise and Vibration

585. WLP Policy W3.9 seeks to reduce the potential for noise impact from waste management facilities. The policy encourages the siting of new waste facilities in locations which are less sensitive to noise emissions, imposing limits and controls on operating practices to minimise noise emissions and setting maximum noise levels at sensitive locations to ensure noise emissions from operations do not become intrusive. RLP Policy 1: Development Requirements supports the grant of planning permission for development subject to noise attenuation being achieved (as part of a wider criteria list).
586. To inform the assessment of the significance of construction and operational noise emissions the planning application is supported by a noise assessment report using industry standard methodologies.
587. This noise assessment utilises background noise monitoring carried out over several days to allow representative background sound levels to be established. The noise sensitive receptors used in the assessment are:
- Receptor 1: Redhill Marina located approximately 1,270m to the west;
 - Receptor 2: Redhill Farm located approximately 1,180m to the west;
 - Receptor 3: Middle Gate Cottage located approximately 1,190m to the south-west;
 - Receptor 4: Thrumpton Village nearest properties located approximately 810m to the northeast;
 - Receptor 5: Winking Hill Farm located approximately 890m to the south-east; and
 - Receptor 6: Ratcliffe on Soar Village nearest properties located approximately 1,700m to the south.
588. During the construction period, noise emissions would vary from day to day depending on the construction activities taking place, with the noisiest activities expected during soil movement and piling work which will occur during the initial stages of construction. The main construction works would be undertaken on weekdays between 07:00 to 19:00 Monday to Friday and 07:00 to 13:00 Saturdays but flexibility is sought to allow scope to carry out quieter construction works outside these hours or enable the completion of a specific element of construction (such as a concrete pour) which cannot be halted once commenced.
589. The noise assessment identifies that the construction activities would not generate noise that exceeds existing background noise levels at any of the surrounding noise sensitive locations. To ensure that the construction works are undertaken to best practice to minimise noise emissions it is recommended that a planning condition is imposed requiring the works to be undertaken in compliance with a Construction Environmental Management Plan (CEMP) to minimise noise as far as practical. The CEMP would

introduce a series of environmental controls including a requirement that plant and machinery is appropriately silenced, serviced and operated with environmental (white noise) reversing warning devices and careful screening of noise generating activities. It is therefore concluded that noise from construction activities would have a neutral impact on the amenity of occupiers of these surrounding properties.

590. An assessment of noise emissions associated with vehicular movements associated with the construction phase has also been undertaken. During this period staff and HGV traffic would increase with the peak period anticipated to be in Month 21 of the construction programme when it is predicted there would be 436 staff movements (car/van) and 106 HGV movements per day (i.e. 53 in and 53 out) would access the site from the A453 dual carriageway and use the unnamed public highway that leads to the site entrance. As there are no residential properties on this section of highway, any increase in vehicles will not adversely impact any sensitive receptors. The increased vehicle movements along the A453 would also result in no significant increase in noise levels since they would merge into the existing traffic flows on this road.
591. The noise assessment of the operational development utilises two baseline scenarios to take account of the EMERGE facility operating alongside the existing power station (scenario 1) and the facility operating following the demolition of the wider power station (scenario 2).
592. Since the EMERGE facility would operate 24 hours a day, separate assessments have been carried out for the daytime and night-time periods which reflect the different operational characteristics during the night-time when there would be no delivery activities and site activities would be quieter, but also ambient background noise levels would be lower. A separate calculation of noise has not been undertaken for the evening period (18:00 – 23:00 hours) on the basis that operational noise emissions from the EMERGE facility during this period are comparable to night-time levels but background noise levels are higher. Therefore, if it is demonstrated that the facility can operate at night without disturbance it is reasonable to conclude it can operate during the evening without disturbance.
593. The design of the EMERGE facility incorporates noise mitigation practices including insulated cladding for the building, use of machinery with low noise emissions, use of noise attenuated ventilation covers, fitment of doors which have fast acting closings and are only opened to allow entry/egress of delivery vehicles and the use of white noise reverse warning devices. These measures are designed to minimise the breakout of noise from the building and reduce noise levels in the surrounding area. It is also recognised that the EMERGE facility occupies a comparatively remote location in the context of its proximity to surrounding residential properties and in many cases screening is provided to nearby communities.
594. The daytime (06:00 – 19:00 hours) BS4142:2014 shows that there would be a small increase in noise of 0.3dB LAeq in Thrumpton village, 0.1dB LAeq at

Redhill Marina, Redhill Farm and Middle Gate Cottage, with no increase predicted at either Winking Hill Farm or Ratcliffe on Soar village under scenario 2 which is considered the worse-case scenario. This level of daytime noise change would result in a negligible impact on noise levels in all locations and therefore daytime operational noise would have a neutral level of effect.

595. The night-time (23:00 – 06:00) BS 4142:2014 noise assessment calculates that there would be an increase in night-time noise of 0.8dB LAeq in Thrumpton village, 0.2dB LAeq at Redhill Marina, Redhill Farm and Middle Gate Cottage 0.1dB LAeq at Winking Hill Farm and no increase within Ratcliffe on Soar village. under scenario 2 (worse-case scenario). These levels of change in night-time noise would have a negligible impact on noise levels in all locations and therefore night-time operational noise would have a neutral level of effect.
596. In terms of regulating operational activities it is recommended that planning conditions be imposed to:
- Impose maximum noise limits on site activities covering both daytime, evening and night time periods;
 - Ensure the final design of the facility incorporates the assumed incorporated mitigation measures to limit the breakout of noise from the operation of the site including the use of insulated cladding, minimising openings in the buildings and the use of fast acting door closures, use of silencers, and limits on vehicle speeds/reversing movements;
 - Restricting the use of mobile plant external of the building during the evening and at night-time;
 - Ensuring doors within the building are closed during the evening and at night-time.
597. In the context of vibration, the Environmental Statement identifies that the perception of ground borne vibration during construction and operation is not anticipated beyond separation distances greater than around 50 m. On the basis that sensitive receptors are at distances much greater than this, vibration impacts can be assumed to be negligible.
598. It is concluded that the noise assessment which supports the planning application demonstrates that the noise emissions from both the construction and operation of the EMERGE facility would have a negligible impact and therefore neutral effect on the amenity of surrounding property and subject to the imposition of the above controls, justified complaints regarding noise emissions associated with the construction and operation of the development are not anticipated. The development therefore is compliant with WLP Policy W3.9 and RLP Policy 1 relating to its level of noise emissions.

Dust

599. WLP Policy W3.10: Dust states that when planning permission is granted for a waste management facility planning conditions will be imposed to suppress dust generation.
600. There is the potential for dust to be released into the atmosphere from the construction and operation of the EMERGE development. Potential impacts have been considered within the Environmental Statement by carrying out a quantitative assessment. This identifies that the site is located remotely from dust sensitive human and ecological receptors with the closest existing residential receptors being located approximately 800m from the site boundary.
601. Dust emissions associated with the construction activities would be managed through a Construction Environmental Management Plan which would aim to minimise the level of dust emissions through a variety of actions including:
- the removal of materials that have the potential to produce dust from the site as soon as possible, and where they are retained for re-use they are covered, fenced or seeded;
 - ensuring sand and other aggregates are stored in designated areas and are not allowed to dry out unless this is required for a particular process in which case ensure that appropriate additional control measures are in place;
 - ensuring an adequate water supply on the site for effective dust/particulate matter suppression;
 - ensuring equipment is readily available on-site to clean any dry spillages as soon as reasonably practicable after the event;
 - ensuring all vehicles switch off engines when stationary;
 - ensuring vehicles entering and leaving the site are covered to prevent escape of materials during transport; and
 - utilising the on-site wheel washing system.
602. Subject to these practices being followed it is concluded the level of risk from dust emissions resulting in nuisance to sensitive receptors during the construction stage would be negligible with no significant adverse effects anticipated.
603. Potential for fugitive dust emissions from the operational phase have also been examined in the Environmental Statement through a quantitative assessment. This identifies that the delivery, unloading and storage of waste materials has the highest potential for dust release but acknowledges that these activities would be conducted within an enclosed tipping hall and held under negative air pressure which prevents the escape of fugitive dust. The roller doors to the tipping hall would be fitted with fast acting closures ensuring they are only opened for short period of time to allow delivery vehicles to enter and leave the building and minimise the risk of dust releases from the process.

604. The Environmental Permit regulating the operation of the EMERGE facility would provide further assurance that all dust emissions would be controlled to ensure there is no impact beyond the installation boundary.
605. It is therefore concluded that the construction, operation and design of the EMERGE facility would minimise the risk of adverse dust emissions and ensure compliance with WLP Policy W3.10.

Litter

606. WLP Policy W3.8: Litter states that when planning permission is granted for a waste management facility planning conditions will be imposed to prevent litter nuisance, identifying potential controls requiring the erection of perimeter litter catch fencing, the enclosure of waste storage areas and the sheeting of delivery lorries. The supporting text to the policy acknowledges that litter is more commonly a problem on uncovered sites where waste is susceptible to wind blow.
607. The Environmental Permit which would regulate the operation of the EMERGE facility would provide the primary control for litter control to ensure that litter does not impact beyond the installation boundary.
608. The Environment Statement sets out the litter controls to demonstrate compliance with WLP Policy W3.8. It explains that the operator would maintain the site in a clean and tidy condition and the enclosed operation of the facility would contain waste deposited and stored at the site. All unloading of residual waste would be undertaken within the enclosed Waste Reception Hall, which, as described above, would be controlled under negative air pressure. This would contain waste material and prevent it from escaping the building.
609. All delivery vehicles to the site would be required to be adequately covered, thus avoiding problems associated with residual waste escaping onto the public highway or other areas outside the boundary of the site. Drivers would only be allowed to un-sheet vehicles after entering the Waste Reception Hall and the applicant has confirmed that any drivers failing to comply with site regulations would be warned and if repeated offences occur, then drivers would be banned from accessing the EMERGE facility.
610. The boundary of the site would be securely fenced which would further prevent any litter being blown beyond the site boundary. The internal and external boundaries of the facility would be inspected daily, and waste material would be collected and disposed of.
611. It is concluded that these controls would ensure that litter would satisfactorily be controlled within the process. Planning conditions are proposed to regulate for the tipping of waste within the building, the closure of the tipping doors except to allow for the passage of delivery vehicles, the erection of

boundary fencing, litter picking within the site boundary, and the sheeting of delivery vehicles to ensure compliance with WLP Policy W3.8.

Odour

- 612. The residual waste processed by the EMERGE facility has potential to generate odour releases which could impact on the amenity of surrounding land and property if effective controls are not put in place.
- 613. WLP Policy W3.7 Odour identifies that odour emissions have potential to affect amenity, particularly where facilities are sited in close proximity to sensitive receptors or odour management arrangements are not satisfactory. Whilst WLP Policy W3.7 focusses itself with odour impacts from landfill sites, the policy is relevant to all waste management facilities and seeks to ensure the appropriate siting of waste management facilities and to secure planning conditions where necessary to minimise odour.
- 614. Odour controls are primarily regulated through the Environmental Permit issued by the Environment Agency. As part of obtaining an Environmental Permit the applicant is required to prepare an Odour Management Plan. This plan would regulate the process to ensure 'best available technique' is used and seek to avoid/minimise odour release. Monitoring of odour releases throughout the operational life of the plant would also be controlled through the permit.
- 615. With regard to the siting of the facility, the closest residential receptor is located circa 800m from the facility and thus the site benefits from significant separation which would allow dispersal of any malodour.
- 616. With regard to site operations, the main potential source of odour emissions from the process would arise within the tipping hall where waste is unloaded from collection vehicles and stored prior to treatment within the incinerator. These operations would be conducted within an enclosed building equipped with fast acting roller shutter doors. The incineration process draws air from the tipping/storage hall into the furnace and removes any malodour from the process. This has the effect of holding the tipping/storage hall under a slight negative air pressure meaning that air is drawn into and contained within the tipping hall rather than being released outside of the building. This process is routinely used within the energy from waste industry and has a proven track record of managing odour. The twin line design of the facility ensures that in the event that one line is shut for maintenance, a second line would continue to operate to maintain negative pressure, but in the event that an unplanned shutdown was to occur an odour suppression would be provided by a deodorising solution.
- 617. A planning condition is recommended to ensure that negative air pressure is maintained within this tipping hall and all emissions to the atmosphere are discharged through an air filtration system thereby ensuring odour emissions from the facility are satisfactorily controlled.

618. Whilst it is acknowledged that waste delivery vehicles have the potential to be malodorous, the location of the EMERGE facility with direct access from the A453 means that any odour release from a delivery vehicle would not pass sensitive residential receptors to access the development from the strategic highway network. Any releases of odour from delivery vehicles on the wider highway network would be transient in nature and pass comparatively quickly and it is acknowledged that these vehicles are already on the highway network transporting the waste arisings. Significant odour nuisance from delivery vehicles is therefore not anticipated.
619. Based on the distance to the nearest sensitive receptor and the mechanisms to be provided to control odorous releases, it is considered that odour impacts from the operational phase would be negligible and therefore ensure compliance with WLP Policy W3.7.

Vermin

620. Local concern has been raised in response to the planning consultation that the operation of the EMERGE facility could potentially give rise to environmental nuisance through the attraction of vermin or other pests.
621. Vermin and pest control is primarily regulated through the Environmental Permit. Experience with modern, well-run energy recovery facilities shows that they should not give rise to such issues predominantly because the waste is contained within an enclosed Waste Reception Hall which is cleaned daily to ensure that material that could attract rodents or other pests does not accumulate.
622. Regular inspections of the EMERGE facility would ensure that any fugitive releases of litter within and adjacent to it that could attract vermin would be collected and disposed of. Should any fly eggs within the residual waste mature and hatch prior to combustion, insecticides would be used to ensure that fly issues are not experienced at the facility. A pest management plan is required as part of the Environmental Permit.

Ground Contamination and Ground Stability

623. The NPPF strongly supports the re-use of land that has been previously developed and of low environmental value. It identifies that when re-development proposals come forward for previously developed land, opportunities should be taken to remediate and mitigate the despoiled, degraded, derelict condition of the land, address any contamination issues and ensure the land is suitably stable. NPPF paragraph 178 states that planning decisions should ensure that:
- a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and

any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);

- after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990, and
- adequate site investigation information, prepared by a competent person, is available to inform these assessments.

624. RLP Policy 40: Pollution and land contamination identifies that where a previously developed site is affected by contamination issues, responsibility for securing a safe development rests with the developer and/or landowner. The policy confirms that when planning permission is granted for the redevelopment of previously developed land, planning conditions will be imposed which require the implementation of necessary ground remedial measures prior to occupation.
625. The Environmental Statement incorporates a Phase 1 Geo-Environmental Assessment to assess the nature and degree of contamination at the site and the implications that any ground contamination from the historical use of the site as an unloading area and car park in connection with the operation of the wider power station has on the proposed future use of the site. The initial appraisal provided by the applicant identifies that the main pollutant linkages are associated with low levels of heavy metal contamination and potential asbestos in the made ground. The risks from this contamination is generally limited to effects to groundworkers during the construction phase. These effects can be mitigated through the use of appropriate personal protective equipment (PPE), toolbox talks and good hygiene. The levels of contamination are found to fall below the Generic Assessment Criteria for a commercial development, with the predominantly hardstanding cover of the proposed development limiting any potential pathway to future users.
626. The Environment Agency in their consultation response agree with the applications conclusion that the initial desk top study incorporated in the Environment Statement identifies the need for a further intrusive investigation of the site to be carried out and a remediation strategy to deal with the risks associated with contamination of the site in respect of the development is submitted for approval in writing. The Environment Agency is satisfied that this can be regulated by planning condition. It is also recommended that a further planning condition is imposed to ensure that any unexpected contamination which may be encountered during groundworks is appropriately managed.
627. In terms of the geology of the site and ground stability, the intrusive site investigation would provide data for robust foundation design requirements based on ground conditions encountered and the structural loads imparted by the building. The design work would be undertaken by experienced

engineers and overseen through the building control process to ensure safe construction for the EMERGE buildings.

628. It is therefore concluded that the Phase 1 Geo-Environmental Assessment satisfactorily considers the nature and degree of contamination at the site and sets the agenda for a further intrusive site investigation and actioning remedial measures regulated through planning condition. This approach is consistent with the approach set out within the NPPF and RLP Policy 40 and the planning consultation advice received from the Environment Agency.

Protection of Groundwaters from Pollution

629. RLP Policy 40 also states that planning permission will not be granted for development which would be liable to result in the infiltration of contaminants into groundwater resources, having regard to any cumulative effects of other developments and the degree of vulnerability of the resource, unless measures would be carried out as part of the development to prevent such contamination taking place.
630. The applicant's Geo-Technical Assessment provides consideration of the implications that existing soil conditions which may be contaminated would have and the potential for pathways to be created by development which would allow the migration of groundwater and contamination, both in the short term, during construction, and in the long term, during operation.
631. During the construction activities there is potential for spillages of fuels and chemicals which could migrate into the underlying soils. The applicant notes that the risks of a localised fuel/chemical spill is unlikely and would be mitigated by the siting of storage facilities on low permeability cohesive made ground which would act as an aquitard, reducing the vertical and lateral migration of contaminants in the soil leachate. A planning condition is recommended to require any fuel and chemical storage areas to be appropriately bunded to minimise the risks of accidental spillage. There is also potential for contaminants within the made ground to be exposed and to become mobilised after rainfall and/or following the movement of material around the site leading to migration to groundwater, but these risks are considered low due to the lack of identified sources of significant contamination. In both cases, the low sensitivity of underlying groundwater in the secondary aquifer, and known poor background water chemistry of the groundwater within the bedrock which has high calcium and sulphate levels due to gypsum dissolution means that the severity of any impacts is likely to be mild. On this basis, the potential significance of these effects is considered to be minor (not significant).
632. Post-construction, the built environment will act as an inherent barrier, limiting any pathways that may expose future site users to contaminated soils. The Environment Agency has requested a planning condition to ensure that no drainage systems for the infiltration of surface water to the ground are permitted without prior written consent to ensure the design of soakaway

system does not mobilise contamination and risk pollution of controlled waters. Subject to these controls, the probability of any adverse impacts from the dispersal of pollution into groundwaters is considered unlikely and therefore the significance of effect is judged to be minor and not significant.

633. The development is therefore considered appropriate in the context of RLP Policy 40.

Flood Risk and Surface Water Flows

634. NPPF paragraph 155 sets out that development should be avoided wherever possible in areas at highest risk of flooding by encouraging development in low flood risk areas. Paragraph 165 requires that major developments should incorporate sustainable drainage schemes to manage surface water flows. Policies within the development relating to flood risk management and surface water management are generally consistent with the NPPF including WLP Policies W3.5 and W3.6: Water Resources, RCS Policy 2: Climate Change and RLP Policy 18: Surface Water Management.
635. A flood risk assessment has been carried out as part of the Environmental Statement in accordance with guidance contained within the NPPF and associated Planning Practice Guidance. The flood risk assessment identifies and assesses the risks of all forms of flooding to and from the proposed development and demonstrates how these flood risks would be managed so that the development remains safe throughout its lifetime, taking climate change into account.
636. The flood risk assessment identifies that the site is not at risk of flooding from a major source (e.g. fluvial and / or tidal). The site has a 'low probability' of fluvial / tidal flooding as it is located within Flood Zone 1 with less than a 1 in 1,000 annual probability of river or sea flooding in any year (< 0.1 %). A secondary flooding source (surface water flooding) has been identified which may pose a low risk to the site. The development is considered as 'essential infrastructure' in line with Planning Practice Guidance. 'Essential infrastructure' uses are appropriate within Flood Zone 1 after the completion of a satisfactory flood risk assessment. It is therefore concluded that the location of the site is appropriate in the context that the site has a low probability of flooding and the development would not increase flood risks to surrounding occupiers of land.
637. The development has potential to affect the hydrology and hydrogeology in the vicinity of the site with potential impacts to surface water run-off, groundwater levels, flow direction and quality.
638. During construction the principal risk to surface water run-off would be from the earthworks creating excess fine sediment. There is also potential risk from hydrocarbons and chemicals polluting surface water run-off and waterbodies. The Environmental Statement identifies a range of pollution prevention and mitigation measures that would be put in place during the

construction project including minimising the amount of excavated and exposed ground; siting of stockpiles remote from drainage facilities, plant and wheel washing; use of designated haul routes; and appropriate management of oil and chemical storage. These actions would manage the level of pollution risk during the construction phase and reduce the magnitude of impacts to a minor or negligible level preventing significant adverse effects resulting. The submission of a construction environmental management plan and approval of a detailed scheme of mitigation for adverse surface water run-off can be regulated by planning condition.

639. The operational design of the EMERGE facility incorporates a sustainable drainage solution incorporating underground attenuation storage (oversized pipes / tanks / cellular storage) with a restricted outfall, permeable surfaces (e.g. grass and / or gravel), rainwater harvesting, a swale, reed bed, grit trap and petrol / oil interceptors within the development site. Surface water would pass through these facilities which would include pollution control infrastructure and attenuation which provide capacity for a 1 in 100 year (+40% allowance for climate change) storm event before discharging water to the wider Power Station site surface water drainage network which provides further treatment (i.e. settlement), prior to the water ultimately being discharged off site at a controlled rate.
640. The design of the drainage system would reduce the surface water run-off rate and volume (when compared to the existing situation), as well as improve the water quality by removing pollutants (through a grit trap and interceptors), reducing potable water demand (through rainwater harvesting), and improve amenity and biodiversity (through swale and reed bed features) in the proposed landscaping.
641. Waste delivered to the EMERGE facility would be managed and stored on sealed concrete areas with appropriately designed storage areas for potentially contaminated materials ensuring any pollutants within the waste would not be able to percolate into the underlying ground. Surface water and foul/process water would be separately collected and managed appropriately.
642. Government guidance contained within the National Planning Practice Guidance (Water Supply, Wastewater and Water Quality), Paragraph 20 advises that septic tanks or package sewage treatment plants should only be considered if it can be clearly demonstrated that discharging into a public sewer is not feasible (taking into account cost and/or practicability and whether the package treatment plant poses a risk to a designated site).
643. The Power Station site benefits from its own sewage plant, located to the south of the existing cooling towers where it is treated before being pumped by existing pipework to the existing lagoons and ultimately the River Trent. The applicant proposes to utilise this facility to serve the EMERGE facility. During the construction phase the compound would connect into this sewage system with this connection maintained initially to serve the operational development. However, following the closure of the Power Station the drain connection between the site and the sewage plant may be destroyed and if

this was to occur the applicant would install a septic tank which would collect foul sewage from the operational facility, with the tank being periodically emptied and transferred by tanker to the existing sewage plant until such time that a new connection can be made.

644. The Environment Agency, in their planning consultation response identify that foul water should be connected to mains drainage wherever possible, highlighting the obligations set out within Paragraph 20 of the PPG. In this instance, the Ratcliffe site is considered a different situation to the norm, as it is an established site which is served by a very large existing private sewer system. The site does not have a mains sewer and this is not cost effective to provide. Providing a mains connection would not provide any environmental benefit given that the existing private treatment works safely manages foul drainage within appropriate environmental standards that is regulated under permit controls. The continued use of these facilities is therefore considered appropriate in the context of paragraph 20 of the PPG.
645. It is concluded that the proposed development would have a minor or negligible overall effect on surface water run-off rates / volumes and would ensure that water quality is protected within the receiving watercourse thus ensuring the development is compliant with the policy requirements within the NPPF, WLP Policies W3.5 and W3.6, RCS Policy 2 and RLP Policy 18 relating to flood risk and surface water management.

Aircraft Safety

646. Nottingham East Midlands Airport is located approximately 5km to the south-west of the application site and thus the development would be located within the airport's 13km safeguarding zone.
647. To ensure that the development does not compromise aircraft safety, consultation advice has been taken from Nottinghamshire East Midlands Airport's Aerodrome Safeguarding Officer and the Civil Aviation Authority. The airport's Safeguarding Officer responded to the initial consultation raising some initial concerns regarding the potential effect of hot thermal plumes on aviation safety and seeking assurances in respect of the extent of plume from the chimneys and the potential for it to reduce visibility. The Civil Aviation Authority did not specifically comment on the planning application, deferring to the local expertise of the airport to ensure aircraft safety is not compromised by the development.
648. Supplementary information has been provided through the two Reg. 25 responses which provide assurances for Nottingham East Midlands Airport to withdraw their holding objection and confirm the EMERGE facility including the associated demolition of the two cooling towers would not compromise aircraft safety subject to a series of planning conditions to regulate the following matters:
- a. In terms of waste storage and its potential to attract scavenger birds, no waste would be handled or stored externally nor transferred to the

facility other than in fully enclosed or sheeted vehicles. A planning condition to regulate these matters as part of a wider Wildlife Hazard Management Plan is recommended.

- b. In terms of the potential for the roofs to provide breeding habitat to roosting gulls, it is also proposed to manage this through the Wildlife Hazard Management Plan, requiring the roof structures to be routinely inspected through the operational life of the facility and the removal of potential nesting habitats.
- c. In terms of the potential for the proposed drainage ponds to provide habitat for large wildfowl, it is proposed that a planning condition is imposed to require the margins to be planted with reedbeds which would deter access by wildfowl.
- d. In relation to requested controls relating to dust emissions from demolition and construction works, demolition consent for the cooling towers is not being sought in this application and therefore it is not appropriate to regulate these matters through this decision. The airport however requests that there is close liaison with the project management team at the demolition phase, including consideration for these works to be undertaken during planned airport maintenance closures. These matters can be covered by an informative note attached to any grant of planning permission.
- e. Dust controls are recommended in relation to the construction and operation of the facility and it is suggested these controls reference the protection of aircraft safety in their reasoning.
- f. A planning condition is recommended to regulate/control exterior lighting.
- g. A planning condition is recommended to regulate and avoid the use of reflective materials and solar panels within the site.
- h. In terms of concerns relating to gas purging and the potential for any thermal plume and content of emissions to affect aircraft safety, a Grampian style planning condition is recommended which requires approval of the composition and modelled thermal plume for the final scheme design prior to the commencement of the development.
- i. In terms of the height of the stack, this is definitively controlled as part of the approved planning application drawings and therefore no further controls are considered necessary.
- j. In terms of the lighting on the flue stacks, a planning condition is recommended to require prior approval of the lighting design to ensure it is in accordance with EASA design guidance and alerts potentially low flying aircraft of the presence of the stacks.
- k. A requirement to agree the height of construction cranes to ensure they do not create a collision hazard.

Protection for Users of Public Rights of Way

649. WLP Policy W3.26: Public Access seeks to ensure the existing public rights of way network is maintained and not disrupted by waste development.
650. The Definitive Map of recorded Public Rights of Way confirms that Thrumpton FP 9 crosses the access road which is proposed to be used for vehicular access to the EMERGE facility. In terms of the wider rights of way network, Thrumpton FP 9 leads to Footpaths 8 and 1 which then link to a cyclepath. There is also a signed cycle route which uses Barton Lane (as a quiet road) and continues on the cycle path at the point where FP 8 starts and runs alongside the A453 and the south side of the power station site to the access roundabout. Both the footpath and the cycle route cross the access road at a similar point.
651. The predicted traffic flows associated with the development identify that there would 309 HGV deliveries a day using the access road across which Thrumpton FP 9 crosses. This has potential implications for the public using both the footpath and cycle route to be able to safely cross the road. To ensure that the footpath and cyclepath users are satisfactorily protected a planning condition is recommended to require the submission of a scheme to protect the crossing points including the use of signage warning the vehicles of the likelihood of pedestrian and cyclists as they come up to this point (cycle route ahead, pedestrian in road) and/or road markings. These measures would ensure that the requirements of WLP Policy W3.26 are satisfied.

Tourism

652. A local resident has raised concerns that the development has potential to adversely affect local tourism by re-enforcing the industrial character of the area, expressing a preference that the power station should be cleared and re-instated to green infrastructure with public access to create a visitor attraction.
653. The area around Ratcliffe Power Station does not have a particular tourist focus. The siting of the EMERGE facility within the power station complex would not significantly change the character of the site and significant visual and landscape impacts that could potentially act as a disincentive to visit an area have not been identified. The planning authority do not share the view of the objector that the midlands has an image of factories and planning blight and is fully satisfied that the EMERGE development incorporates a modern building of good architectural design which will positively contribute to the wider region.
654. It is acknowledged that an alternative redevelopment of the power station could have potential to create a visitor attraction within the site but this is not part of the development proposed and therefore is not material in the assessment of this planning application.

Consideration of environmental effects associated with of electricity grid connection and the demolition of the two cooling towers

655. The installation of the electricity grid connection and the demolition of the two cooling towers are not specifically sought planning permission as part of the EMERGE planning application on the basis that it is anticipated these works will be undertaken as permitted development. Notwithstanding this fact, the works are an important part of the overall EMERGE development and are necessary to ensure that the wider development project satisfies the requirements of planning policy.
656. To ensure the Environmental Statement provides consideration to the potential environmental effects of the development including any secondary effects of the wider development project, a supplementary assessment of the environmental effects from providing the electrical grid connection and demolishing the cooling towers has been provided as part of the second Reg. 25 submission. This supplementary assessment gives consideration to potential environmental effects, specifically in respect of noise, vibration, dust, land quality, transport, ecology, nature conservation, surface water, flood risk, heritage, landscape, visual effects and cumulative effects associated with these works.
657. The updated information provided through the 2nd Reg. 25 submission ensures that the Environmental Statement now incorporates sufficient environmental information in relation to the grid connection and cooling towers demolition works to assess the environmental effects of these works. The document has been subject to full consultation with all technical consultees.
658. Issues raised by the HS2 project team identify that the explosive demolition of the cooling towers is likely to require the temporary closure of the railway line, and request the EMERGE project team maintain an ongoing dialogue with HS2 to coordinate these arrangements. It is recommended these comments are forwarded to the EMERGE project team in an informative note as part of any decision notice issued.
659. Nottinghamshire Wildlife Trust raise concerns that the assessment of ecological effects associated with the demolition of the cooling towers does not incorporate any ecological surveys of the structures, particularly their potential for nesting sites for breeding birds. Whilst acknowledging the Wildlife Trusts comments in this respect, the programme for the actual demolition works to take place is in around 8–9 years' time when ecological conditions may have changed and will be undertaken following approval being provided as part of a separate regulatory approval process. The applicant has confirmed that ecological surveys would be undertaken at this time and if these identified nesting habitats appropriate mitigation would be provided at this stage. This approach is considered appropriate in the context of the scope of the development sought planning permission in this submission and the separate regulatory process identified for the demolition of the cooling towers.

660. Based on the information incorporated within the 2nd Reg. 25 submission it is concluded that works associated with the installation of the grid connection and demolition of the two cooling towers would not result in any significant adverse environmental impacts.

Legal Agreement

661. Any grant of planning permission for the proposed development would be subject to the prior completion of a legal agreement to secure:
- a. The retention of the Ratcliffe on Soar Power Station railhead and connecting rail link to the mainline railway for the duration of the operational life of the EMERGE facility; and
 - b. Controls to regulate lorry routing.
662. The applicant would be expected to cover all reasonable costs incurred by the County Council in the drafting and execution of this agreement.

Other Options Considered

663. The report relates to the determination of a planning application. The County Council is under a duty to consider the planning application as submitted.
664. Schedule 4 of the EIA Regulations 2017 requires the applicant to describe the reasonable alternatives that have been considered by the applicant in preparing their plans for the site and the reasoning for progressing one alternative over another. The legislation does not require the applicant to consider all potential options.
665. Chapter 3 of the Environmental Statement explains the alternatives considered by the applicant, confirming that alternative technology solutions, alternative direct combustion technologies and alternative design solutions have been considered and documents the reasons behind their decision to progress with the EMERGE facility as proposed.
666. In terms of alternative technology options, the applicant has considered advanced thermal treatment (i.e. pyrolysis and gasification) in addition to the direct combustion process proposed in this application, concluding that direct combustion is well proven technology used throughout the UK and Europe which is less complex and therefore is considered to be the most appropriate waste recovery technology option currently available.
667. In terms of alternative direct combustion technologies, the applicant has given consideration to different incineration (combustion) processes including fixed hearth furnace, pulsed hearth technologies, rotary kilns, fluidised bed technology and the preferred option of moving grate which the applicant states is the leading technology in the UK and Europe for the combustion of municipal and other similar wastes (including residual waste), being installed on over 90% of fully operating UK EfW plants and some circa

98% of European plants. Moving grate technology therefore represents a proven and developed design and also provides environmental certainty in relation to emissions.

- 668. A twin line combustion process has been selected on the basis that it provides the flexibility to shut down one of the processing lines for periods of routine maintenance whilst still maintaining the ability of the plant to receive and process waste and thus fulfil waste contract obligations.
- 669. In terms of design, the architects have considered alternative options for the site layout, the shape and form of the main building and the overall appearance of the facility in the site's context. The decision to proceed with the EMERGE design is based on the fact that the applicant considers it provides an operationally efficient facility utilising buildings of varying heights to minimise their scale within the design limitations of the installed plant, locating the majority of plant and equipment in the western side of the site where it is more visually enclosed, minimising the prominence of the stacks as far as practical and locating them away from receptors, providing efficient vehicle circulation, and incorporating landscaping within the site design.

Statutory and Policy Implications

- 670. This report has been compiled after consideration of implications in respect of crime and disorder, data protection and information governance, finance, human resources, human rights, the NHS Constitution (public health services), the public sector equality duty, the safeguarding of children and adults at risk, service users, smarter working, and sustainability and the environment, and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.
- 671. Crime and Disorder Implications: The proposed EMERGE facility would be developed within the boundaries of the existing Ratcliffe on Soar Power Station site which is secured by an electrical security fence, benefits from external lighting and remotely monitored CCTV. The facility would be staffed on a 24 hour basis with controlled access at the gateway.
- 672. Data Protection and Information Governance: Any member of the public who has made representations on this application has been informed that a copy of their representation, including their name and address, is publicly available and is retained for the period of the application and for a relevant period thereafter.
- 673. Financial Implications: The recommendation to grant planning permission is provided on the basis that the applicant would be expected to enter into a Section 106 legal agreement to regulate the retention of the existing railhead facility and connecting rail line and controls in relation to lorry routeing. The applicant would be expected to cover all reasonable legal costs incurred by

the County Council during the drafting and execution of the required legal agreement.

674. Human Rights Implications: The relevant issues arising out of consideration of the Human Rights Act have been assessed in accordance with the Council's adopted protocol. Rights under Article 8 and Article 1 of the First Protocol may be affected.
675. The main Convention rights relevant when considering planning proposals are Article 1 of the First Protocol, which guarantees the right of peaceful enjoyment of possessions, and Article 8 which guarantees a right to respect for private and family life. Article 8 also provides that there shall be no interference by a public authority with the exercise of this right except in the interests of national security, public safety, or the economic well-being of the country, for the prevention of disorder or crime, for the protection of health or morals, or the protection of the freedom of others.
676. A grant of planning permission has potential to affect these rights, but they are qualified rights as noted above. In assessing that balance when making a decision, the Waste Planning Authority may also take into account that the amenity of local residents could be adequately safeguarded by planning conditions. Indeed, depending on the conclusion reached as to the level of efficacy of the safeguards, it may be concluded that there is a minimal interference with Convention rights in any event.
677. In this instance it is not considered that there would be any disproportionate interference with the human rights of nearby residents. On that basis it is considered that the wider benefits of the development in so far that it provides a modern waste management facility which generates low-carbon energy with associated benefits should take precedence over the limited impacts (which are limited and mitigated through the planning conditions) on the Convention rights of private individuals.
678. Accordingly, the grant of planning permission for this development would be in accordance with Convention rights and be entirely lawful.
679. Public Sector Equality Duty Implications: The report and its consideration of the planning application has been undertaken in compliance with the Public Sector Equality duty. Potential direct, indirect and cumulative impacts from the proposal have been considered equally to all nearby receptors and resulting from this there are no identified impacts to persons with a protected characteristic.
680. Implications for Sustainability and the Environment: Implications to sustainability and the environment are considered within the report. Notably the development would positively assist with the sustainable management of waste by diverting residual waste from landfill disposal and managing it within a recovery facility and generating low carbon energy which would have a positive impact in terms of climate change effects. Balanced against this are the limited impact to the environment, notably in terms of the visual effects,

heritage effects and transport levels. The report considers these issues, balancing their merits as part of the recommendation to support a grant of planning permission.

681. There are no safeguarding of children and adults at risk implications, implications for County Council service users, or human resource implications.

Conclusion and Planning Balance

682. This is a complex planning application which has attracted considerable public interest. In formulating the recommendation all the evidence and potential impacts of the development have been carefully examined. This has included analysing the applicant's planning application and Environmental Statement including the additional information supplied under Regulation 25 and other supporting documentation, and the representations and comments from consultees and members of the public. The Environmental Statement is comprehensive and examines the environmental effects of the development in detail. The fact that some of those making representations to the County Council do not agree with it, or with some aspects of it, is not unexpected and this does not prevent it from being a robust Environmental Statement (as defined in the regulations).
683. In accordance with section 38 of the Planning and Compulsory Purchase Act 2004, the decision on this application should be taken in accordance with the Development Plan unless material considerations indicate otherwise. There are a large number of relevant development plan policies. The planning application should not be refused planning permission simply because it fails to satisfy an individual policy, the determining factor being whether the proposals accord with the development plan when read as a whole. However any breach or tension in planning policy needs to be carefully balanced against the benefits which may be derived from the development.
684. In considering the planning balance that applies it is first necessary to identify the benefits of the proposed development and to assess the weight which each benefit should attract in the overall decision.
- a. The use of residual waste as a fuel to generate energy within the EMERGE facility would assist in the diversion of waste from landfill disposal and deliver more sustainable waste management at a higher level in the waste hierarchy and thus is attributed significant positive weight in the overall planning balance.
 - b. Whilst it is clear that there is a shortfall of residual waste management recovery capacity within Nottinghamshire and Nottingham which is calculated to broadly equate to the operational capacity of the EMERGE facility, it is acknowledged that the projections of future residual waste requiring treatment in the plan area identify some scenarios where the capacity of the EMERGE facility potentially

exceeds Nottinghamshire and Nottingham's level of need. Since WCS Policy WCS3 seeks to ensure the level of waste management capacity is broadly equivalent to the amount of waste produced in the plan area, the uncertainties regarding the precise level of waste requiring treatment, particularly in future years, means that the need for the facility in the context of WCS Policy WCS3 should be given moderate beneficial weight in the planning balance, rather than substantial weight.

- c. If the facility was shown to exceed the residual waste management shortfall of Nottinghamshire and Nottingham, it would need to import waste from outside the plan area. There are shortfalls in residual waste management capacity at both national and regional level, evidenced by the UK's continuing dependence on landfill disposal. The EMERGE facility would assist in the diversion of this waste from landfill disposal, enabling it to be managed at a higher level in the waste hierarchy, thus achieving more sustainable waste management. Whilst these benefits could be viewed as significantly positive in the overall planning balance, there is potential for some of these deliveries to involve haulage of up to 2 hours duration resulting in potential carbon emissions from transport. Therefore, the level of benefit provided by the EMERGE facility in terms of managing waste from outside the Development Plan area is given moderate benefit in the planning assessment, but if it was shown that the operation of the facility offsets the need to export waste to Europe for treatment, it would potentially result in a reduction in vehicle journeys and thus the level of benefit would be significant.
- d. The conclusion reached in terms of compliance with Development Plan policies relating to climate change is that they are supportive of the development, notably RCS Policy 2: Climate Change, RLP Policy 16, Renewable Energy and WCS Policy 14: Managing Climate Change. Furthermore, the wider material considerations are also supportive of a grant of planning permission, most notably NPPF paragraph 145 which requires planning applications for low carbon energy to be granted planning permission where environmental impacts are or can be made acceptable and the consistency of the development with DEFRA's Energy from Waste Guide. The use of the EMERGE facility would result in a net reduction of 106,079 tonnes of CO₂ per year compared to disposing of the same quantity and composition of waste within a landfill. Climate change is a matter which is given significant weight in the planning balance. The report acknowledges that potential changes to the composition of residual waste could change the level of superiority that energy from waste has over landfill in terms of lower greenhouse gas emissions and therefore the climate change benefits have been given moderate beneficial weight in the planning balance. There is realistic potential to develop the technology and install carbon capture and storage which would ensure longer term significant benefits are provided by the

development having regard to the Government's commitment to Net Zero by 2050.

- e. The electrical energy generated from the process is low carbon. Policy within the NPPF, RCS Policy 2 and RLP Policy 16 is clear insofar that low carbon energy developments should be approved where the environmental impacts are (or can be made) acceptable. Government policy identifies that this should be given significant weight in the planning balance. However, the facility is unlikely to beneficially dispatch its residual heat energy at the date of commissioning, reducing the maximum theoretical climate change benefit of the facility. Acknowledging the importance given to the development of heating networks served by energy from waste in Government policy and the fact that a lack of heat user may erode some of the potential benefits over time, the level of beneficial weighting given to the low carbon energy produced by the facility is tempered from significant to moderate beneficial weighting. Regeneration and housing development in the area surrounding the EMERGE facility may provide opportunities for developing a heat network in the medium to longer term, but the lack of any firm commitments to utilise the heat means that these potential benefits are given limited weight in the planning assessment.
- f. The assessment of the locational policies incorporated in the development plan identifies that they are supportive of the siting of the EMERGE facility at Ratcliffe on Soar Power Station. Key policy support is provided through WCS Policy 7 and Policy 4 which promote the use of industrial and previously developed land in close proximity to Nottingham for large scale energy recovery facilities. RCS Policy 5 and RLP Policy 15 are also supportive of development at the power station site.
- g. In the context of compliance with Green Belt matters, the development has been assessed against NPPF Green Belt Policy, and in particularly the policy requirements of paragraph 145(g) relating to the redevelopment of previously developed land within the Green Belt. This assessment identifies that there would be some negative impacts to the openness of the Green Belt associated the application site itself insofar that the EMERGE facility would have a greater impact on the openness of the Green Belt than the existing site features and also 'transitional' impacts which occur for the period before the two cooling towers are demolished. The development therefore has been assessed as not fully complying with the requirements of NPPF paragraph 145(g) and thus is considered as inappropriate development in the context of Green Belt policy. NPPF paragraphs 143 and 144 set out a clear policy requirement insofar that inappropriate development in the Green Belt should not be granted planning permission except where 'very special circumstances' can be demonstrated and in such cases only where the harm to the Green

Belt by reason of inappropriateness, and any other harm resulting from the proposal is clearly outweighed by other considerations having regard to the substantial weight that should be given to any harm to the Green Belt within this balance. In terms of making the assessment of whether very special circumstances exist, the transitional and site-specific impacts to the openness of the Green Belt and harm by reason of inappropriateness have been given substantial weight in this assessment. Other harms from the development have also been considered. Very special circumstances have been identified and it is noted that the key concerns relating to compliance with Green Belt policy have been significantly re-balanced by the arrangements to demolish the cooling towers across the wider power station site. Following the demolition of the cooling towers by 2030 (which will be secured by planning condition), in practical terms there will be an overall gain in terms of wider impacts of the wider power station site on the Green Belt. Other key benefits have also been acknowledged relating to sustainable waste management, the production of low carbon energy, reductions in CO₂ emissions compared to taking the waste to landfill, and job creation, including the national and local policy support for these benefits. Overall, it is concluded that 'very special circumstances' do exist and these benefits clearly outweigh the harm to the Green Belt and any other harms. The proposed development therefore is considered acceptable in the context of Green Belt policy, albeit as a departure in the context of NPPF Paragraph 143 and 144.

- h. NPPF paragraph 11 incorporates a presumption in favour of sustainable development, setting out that development which accords with an up-to-date Development Plan should be approved without delay. The assessment of the locational policies incorporated within the Development Plan concludes that the siting of the EMERGE facility at the Ratcliffe on Soar Power Station site is appropriate subject to there not being unacceptable environmental impacts. Since one of the main tests in any planning decision is the question of whether the location of the development site is appropriate, demonstrating compliance with the land use policies of the Development Plan is of key importance and given significant beneficial weight in the overall planning balance.
- i. The job creation and economic benefits provided by the development are given significant beneficial weight, in accordance with the balance that the NPPF and RCS Policy 5 advises should be given to these benefits.

685. In terms of the potential negative impacts of the development, these are summarised below:

- a. The development would have some negative visual impacts, however, their magnitude would not be significantly harmful (above moderate adverse). In the overall planning balance, the visual impact of the

development is given minor negative weight having regard to the less than significant magnitude of impact identified.

- b. The development would have some negative impacts to the setting of heritage assets primarily as a result of visual intrusion from the tallest elements of the facility affecting views from heritage assets and also from the demolition of the two cooling towers which form part of a larger non-designated heritage asset. The magnitude of these heritage impacts are assessed as being less than significant, however as noted earlier the Listed Building Act and NPPF policy requires considerable importance and great weight to be given to the preservation of heritage assets. Having done so it is considered appropriate to give these impacts moderate negative weighting in the overall planning assessment.
- c. The construction and operation of the EMERGE facility would result in some residual minor environmental issues which have potential to influence local levels of air quality, noise, dust and ecology, but the magnitude of effect would be within the parameters of established environmental control limits and are readily capable of being mitigated/controlled through the planning conditions. Because of the potential to mitigate and control the magnitude of these impacts it is considered appropriate to give them neutral to very minor negative weighting in the overall planning balance.

686. Overall it is considered that energy from waste is an essential intermediate technology which will deliver savings in carbon emissions when compared to current waste management practice. Notwithstanding this fact, the process will need to improve its performance to ensure continued climate change benefits in the longer term and the weight to climate change benefits is reduced due to the potential for these to reduce over time without future improvements such as the future installation of carbon capture technology in response to changing regulatory requirements. More stringent regulatory controls outside of the planning system are likely to be imposed in the future by Government if the UK's Net Zero target is to be achieved by 2050 which the development will need to comply with if it is to continue operating. The Environmental Permit regime and wider pollution controls are the appropriate regulatory procedures for regulating emissions as opposed to the grant of planning permission. Carbon capture readiness is not currently mandated in policy or regulations for generating stations below 300MW. The applicant's Net Zero road map sets out that there are a variety of potential future options to modify and improve the process and reduce its carbon intensity in response to changing regulatory requirements. There are a number of potential pathways and policy levers at a national level outside of the planning process available to the Secretary of State to achieve the UK's net zero target and objectives which are relied upon by the Secretary of State in national energy policy.

687. The existing context of the Ratcliffe-on-Soar Power Station as a major developed site assists with reducing the magnitude of the environment

effects of the development. The power station includes a series of very large and very prominent structures which exert a strong influence upon the surrounding area. The EMERGE facility would be developed alongside these buildings, but has been sited alongside the structures within the power station which are planned to be retained in the longer term and this grouping of buildings assists in reducing the prominence of the development.

688. The EMERGE facility has been designed to minimise its effect on the surrounding environment as far as practical, but it is acknowledged that a development of this scale cannot be undertaken without some adverse environmental effects. The visual and heritage impacts of the development are acknowledged, but in terms of visual impacts it is noted the Overarching National Policy Statement for Energy (EN-1) acknowledges that it is almost impossible to carry out a large infrastructure development such as the EMERGE facility without some level of visual impact and therefore acknowledges that it is appropriate for the planning decision to balance any level of visual harm against the benefits of the project in the wider planning decision. In the context of heritage impacts paragraph 196 of the NPPF provides scope to weigh the public benefits of the proposal against the impacts to the historic environment which are less than substantial. As noted below, the impacts of heritage are considered to be clearly outweighed by the benefits.
689. In other respects, the site benefits from good transport links with direct access to the A453 dual carriageway. The use of this road and other parts of the Strategic Highway Network to deliver waste to the site can be secured by a legal agreement. Significant environmental effects to local landscape character, air quality and public health, noise and vibration, dust, litter, ecology, rights of way, airport safety, odour, ground contamination, drainage and flood risk or socio-economic effects are not anticipated. The operator proposes to host a community liaison group during the construction and initial operational phases of the development to provide the local community an opportunity to liaise with the EMERGE project team regarding any local environmental issues.
690. Overall, it is concluded that the development can be undertaken without resulting in any significant unacceptable impacts on any element of environmental quality or the quality of life of those living or working nearby thus ensuring compliance with WCS Policy WCS13.
691. In applications of this scale a judgement of the planning merits is required taking account of the planning balance. Having regard to all matters set out, the assessment of planning balance in this instance is quite clear. Whilst acknowledging the minor adverse environment effects of the development, the benefits provided by the development and the weight that should be given to these in the decision strongly support a grant of planning permission for the development.
692. Planning law incorporated within Section 38(6) of the Planning and Compulsory Purchase Act 2004 and section 70(2) of the Town and Country

Planning Act 1990 requires that applications for planning permission are determined in accordance with the development plan unless material considerations indicate otherwise. Paragraph 11c of the NPPF confirms that planning authorities should approve development proposals that accord with an up-to-date development plan without delay. This approach is consistent with Nottinghamshire and Nottingham Waste Core Strategy Policy WCS1 which confirms that planning applications that accord with the policies in the core strategy will be approved without delay, unless material considerations indicate otherwise. The assessment of the planning application against the development plan confirms it is in accordance with its policies when read as a whole. Consideration has been given to all material considerations, identifying that there are some environmental considerations which need to be placed on the negative side of the planning balance. However, they are not considered to outweigh the compliance with the Development Plan and wider material considerations which support the development and when considered in balance support a grant of planning permission.

- 693. It is therefore concluded that, subject to the imposition of recommended planning conditions and securing the Section 106 legal agreement, the overall balanced conclusion is to support a grant of planning permission.
- 694. If members are minded to support a grant of planning permission it will be necessary to refer this decision to the secretary of state as a Green Belt departure and provide the Secretary of State a 21 day period to decide whether he wishes to intervene in the decision and call-in the planning application before the County Council issue the decision notice.

Statement of Positive and Proactive Engagement

- 695. In determining this application, the Waste Planning Authority has worked positively and proactively with the applicant by entering into pre-application discussions; encouraging pre-application community engagement which the applicant acceded to by holding pre-application exhibitions and distribution of newsletters, and the scoping of the application. The proposals and the content of the Environmental Statement have been assessed against relevant Development Plan policies, the National Planning Policy Framework, including the accompanying technical guidance and European Regulations. The Waste Planning Authority has identified all material considerations; forwarded consultation responses that may have been received in a timely manner; considered any valid representations received; liaised with consultees to resolve issues and progressed towards a timely determination of the application. Issues of concern have been raised with the applicant and have been addressed through negotiation and the submission of supplementary information through the Regulation 25 submission. The applicant has been given advance sight of the draft planning conditions and the Waste Planning Authority has also engaged positively in the agreement of heads of terms for the Section 106 legal agreement. This approach has been in accordance with the requirement set out in the National Planning Policy Framework.

RECOMMENDATIONS

696. Subject to the application being referred to the Secretary of State in accordance with the Town and Country Planning (Consultation) (England) Direction 2009 and the Secretary of State deciding not to call in the application for his own determination, it is **RECOMMENDED** that the Corporate Director – Place be instructed to enter into a legal agreement under section 106 of the Town and Country Planning Act 1990 to secure the retention of the Ratcliffe on Soar Power Station railhead and connecting rail link to the mainline railway for the duration of the operational life of the EMERGE facility and to regulate lorry routeing.
697. It is **FURTHER RECOMMENDED** that subject to the completion of the legal agreement and within three months of receiving notification from the Secretary of State that he does not wish to call in the planning application for determination, or another date which may be agreed by the Team Manager Development Management in consultation with the Chairman and the Vice Chairman, the Corporate Director – Place be authorised to grant planning permission for the above development subject to the conditions set out in Appendix 1 of this report. In the event that the legal agreement is not signed before the 22 September 2021, or within any subsequent extension of decision time agreed with the Waste Planning Authority, it is **RECOMMENDED** that the Corporate Director – Place be authorised to refuse planning permission on the grounds that the development fails to provide for the measures identified in the Heads of Terms of the Section 106 legal agreement within a reasonable period of time. Members need to consider the issues set out in the report and resolve accordingly.

ADRIAN SMITH

Corporate Director – Place

Constitutional Comments

Planning & Rights of Way Committee is the appropriate body to consider the contents of this report by virtue of its terms of reference. [RHC 25/05/2021]

Financial Comments

The financial implications are set out in paragraph 646 of the report. The recommendation to grant planning permission is provided on the basis that the applicant would be expected to enter into a Section 106 legal agreement to ensure the retention of the existing railhead facility and connecting rail line and controls in relation to lorry routeing. The applicant would be expected to cover all reasonable legal costs incurred by the County Council during the drafting and execution of the required legal agreement. [SES 25/05/2021]

Background Papers Available for Inspection

The application file is available for public inspection by virtue of the Local Government (Access to Information) Act 1985.

Electoral Division(s) and Member(s) Affected

Leake and Ruddington

Councillor Reg Adair

Leake and Ruddington

Councillor Matt Barney

Report Author/Case Officer

Mike Hankin

0115 9932582

For any enquiries about this report, please contact the report author.

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RECOMMENDED PLANNING CONDITIONS

Commencement

1. The development hereby permitted shall be begun within 3 years from the date of this permission.

Reason: To comply with the requirements of Section 91 (as amended) of the Town and Country Planning Act 1990.

2. The development hereby permitted shall not be commenced until such time as:
 - a. Planning approval has been demonstrated to exist for the demolition of the two cooling towers.
 - b. A programme for the demolition for the two cooling towers has been approved in writing by the Waste Planning Authority (WPA).
 - c. A record of the heritage asset of the two cooling tower structures to be demolished has been submitted to the WPA and approved in writing. The heritage record shall incorporate visual, descriptive and analytical information including the use of drawings to identify the cooling towers' location, age, history, materials, dimensions and use and incorporate arrangements for making the document publicly available including entry onto the historic environment record.

The demolition of the cooling towers shall take place in accordance with the agreed programme and timetable and be completed no later than 31st December 2030.

Reason: The submission is required prior to the commencement of the development to ensure that appropriate arrangements are in place for the demolition of the two southernmost cooling towers to a satisfactory timetable and the heritage asset of these structures is appropriately recorded and thus ensure compliance with Rushcliffe Local Plan Part 2: Land and Planning Policy 21: Green Belt and Policy 28: Conserving and Enhancing Heritage Assets.

3. The operator shall notify the WPA of the date of the material start of each phase of development in writing at least 7 days but not more than 14 days prior to each phase. The phases of development shall comprise:
 - a. the commencement of construction;

- b. the commencement of commissioning trials (“commissioning trials” are defined as operations in which waste is processed under specified trials to demonstrate that the development complies with its specified performance); and
- c. the date when the development will become fully operational (“fully operational” is defined as the point from which it has been demonstrated that the development operates in accordance with its specified performance once the commissioning trials have been successfully completed).

Reason: To enable the WPA to monitor compliance with the conditions of the planning permission.

Approved Plans

- 4. Unless otherwise required pursuant to conditions of this permission, the development hereby permitted shall be carried out in accordance with the following schedule of plans received by the WPA on the 16th July 2020.

- i. PL101 Statutory Plan
- ii. PL105 Existing Site Layout Plan
- iii. PL110 Proposed Site Layout Plan
- iv. PL120 Proposed Main Facility Ground Floor Plan
- v. PL130 Proposed Main Facility Roof Plan
- vi. PL140 Office & Admin Floor Plan – Ground Floor
- vii. PL141 Office & Admin Floor Plan – Upper Floor (Admin Level 1)
- viii. PL142 Office & Admin Floor Plan – Upper Floor (Admin Level 2)
- ix. PL143 Office & Admin Floor Plan – Upper Floor (Control Room)
- x. PL150 Proposed Fencing Plan
- xi. PL200 Existing Site Section A-A
- xii. PL201 Existing Site Section B-B
- xiii. PL210 Proposed Site Section A-A
- xiv. PL211 Proposed Site Section B-B
- xv. PL310 Proposed Main Facility – South Elevation
- xvi. PL311 Proposed Main Facility – North Elevation
- xvii. PL312 Proposed Main Facility – East Elevation
- xviii. PL313 Proposed Main Facility – West Elevation
- xix. PL400 Weighbridge Gatehouse Plans & Elevations
- xx. PL401 Fire Water Tank Plan & Elevations
- xxi. PL402 Pump House Plan & Elevations
- xxii. PL403 Fuel Tank Plan & Elevations
- xxiii. PL404 Ammonia Hydroxide Tank Plan & Elevations
- xxiv. PL405 Polished Water Tank Plan & Elevations
- xxv. PL406 Raw Water Tank Plan & Elevations
- xxvi. PL407 CHP Building Plan & Elevations
- xxvii. PL408 Waste Water Treatment Pit Plan & Elevations
- xxviii. PL409 Water Treatment Plant Plan & Elevations
- xxix. PL410 Bicycle Shelter Plan & Elevations
- xxx. PL411 11/132 kV Transformer Compound & Substation Plan

xxxi.	PL412 11/132 kV Transformer Compound & Substation Elevations
xxxii.	PL413 Fencing & Gating Details
xxxiii.	PL414 Workshop Plan & Elevations
xxxiv.	PL415 Condensate Tank Plan & Elevations
xxxv.	2749-01-01 Rev A Preliminary Surface Water Drainage Design
xxxvi.	2749-01-02 Illustrative Landscape Proposals: Sheet 1 of 2 Overview
xxxvii.	2749-01-03 Illustrative Landscape Proposals: Sheet 2 of 2 Inset

Reason: For the avoidance of doubt as to the development that is permitted.

Construction Materials

5. Notwithstanding the details shown on the approved plans, the implementation of the finishes shall not commence until details and samples of the materials to be used in the construction of the external surfaces of the buildings hereby permitted have been submitted to and approved in writing by the WPA. The materials and finishes proposed should not be reflective such that they may cause a hazard or distraction to pilots using East Midlands Airport. Development shall be carried out in accordance with the approved details.

Reason: In the interest of visual amenity and to minimise impact to the surrounding landscape in accordance with Policy W3.3 of the Nottinghamshire and Nottingham Waste Local Plan and ensure aircraft safety.

Ground Investigation

6. Development, other than that required to be carried out as part of an approved scheme of remediation, must not commence until Part A of this condition and, if required, Part B have been complied with. Thereafter, and if required, the remediation scheme must be carried out under Part C in accordance with its approved details and programme. If unexpected contamination is found after development has begun, development must be halted on that part of the site affected by the unexpected contamination to the extent specified by the WPA in writing, until Part D has been complied with in relation to that contamination.

Part A: Site Characterisation: An investigation and risk assessment, in addition to any assessment provided with the planning application, must be completed in accordance with a scheme to assess the nature and extent of any contamination on the site, whether or not it originates on the site. The contents of the scheme are subject to the approval in writing of the WPA. The investigation and risk assessment must be undertaken by competent persons and a written report of the findings must be produced. The written report is subject to the approval in writing of the WPA. The report of the findings must include:

- i. A survey of the extent, scale and nature of contamination;
- ii. An assessment of the potential risks to:
 - a. human health;
 - b. property (existing or proposed) including buildings,
 - c. crops, livestock, pets, woodland and service lines and pipes;
 - d. adjoining land;
 - e. ground and surface waters;
 - f. ecological systems; and
 - g. archaeological sites and ancient monuments.
- iii. An appraisal of remedial options, and proposal of the preferred option(s).
This must be conducted in accordance with DEFRA and the Environment Agency's 'Model Procedures for the Management of Land Contamination, CLR 11'.

Part B: Submission of Remediation Scheme: Should the investigation and risk assessment in Part A show that there is contamination requiring remediation, a detailed remediation scheme to bring the site to a condition suitable for the intended use by removing unacceptable risks to human health, buildings and other property and the natural and historical environment must be prepared, and is subject to the approval in writing of the WPA. The scheme must include all works to be undertaken, proposed remediation objectives and remediation criteria, timetable of works and site management procedures. The scheme must ensure that the site will not qualify as contaminated land under Part 2A of the Environmental Protection Act 1990 in relation to the intended use of the land after remediation.

Part C: Implementation of Approved Remediation Scheme: The remediation scheme must be carried out in accordance with its approved details and programme unless otherwise agreed in writing by the WPA. The WPA must be given two weeks written notification of commencement of the remediation scheme works. Following completion of measures identified in the approved remediation scheme, a verification report that demonstrates the effectiveness of the remediation carried out must be produced, and is subject to the approval in writing of the WPA.

Part D: Reporting of Unexpected Contamination: In the event that contamination is found at any time when carrying out the approved development that was not previously identified it must be reported in writing immediately to the WPA. An investigation and risk assessment must be undertaken in accordance with the requirements of Part A, and where remediation is necessary a remediation scheme must be prepared in accordance with the requirements of Part B, which is subject to the approval in writing of the WPA. Following completion of measures identified in the approved remediation scheme a verification report must be prepared, which is subject to the approval in writing of the WPA in accordance with Part C.

Reason: To protect the environment and ensure that the site has appropriate remediation/mitigation measures introduced to ensure that it is suitable for the proposed use in accordance with the requirements of the National Planning Policy Framework. These details are requested prior to the commencement of the development to ensure that the initial groundworks which are carried out at the start of the development project remediate any contamination within the ground in accordance with an approved scheme.

Regulation of Construction Activities

7. Prior to the commencement of the development hereby permitted a Construction Environmental Management Plan (CEMP) shall have been submitted to and approved in writing by the WPA. The CEMP shall include but not be limited to:
- i Contractors' access arrangements for vehicles, plant and personnel and facilities for parking of contractors' vehicles;
 - ii Contractors' site storage area/compound;
 - iii The number, size (including height) and location of all contractors' temporary buildings;
 - iv Temporary means of enclosure and demarcation of the site operational boundaries, to be erected prior to the commencement of construction operations in any part of the site and maintained for the duration of construction operations;
 - v The means of moving, storing and stacking all building materials, plant and equipment around the site;
 - vi Measures to ensure that dust emissions are minimised;
 - vii Measures to ensure vehicles entering and leaving the site are covered to prevent escape of materials during transport;
 - viii Details of external floodlighting installed during the construction period including hours of operation and the arrangements for shielding light spillage to sensitive ecological habitats to the north of the planning application site;
 - ix Arrangements for the management of oil and chemical storage;
 - x Measures to ensure the risks to groundworkers arising from potential ground contamination are minimised;
 - xi The method of controlling and discharging groundwater during construction to avoid pollution of surface water and the underlying groundwater;

- xii A method statement for minimising the amount of construction waste resulting from the development to include details of the extent to which waste materials arising from the demolition and construction activities will be reused on site and demonstrating that as far as reasonably practicable, maximum use is being made of these materials. If such reuse on site is not practicable, then details shall be given of the extent to which the waste material will be removed from the site for reuse, recycling, composting or disposal;
- xiii Details of any wheel wash facility, use of water bowsers and any other measures necessary to ensure that vehicles do not leave the site in a condition whereby mud, clay or other deleterious materials are carried onto the public highway;
- xiv Details of the height of construction cranes to be notified in accordance with Civil Aviation Authority Guidance CAP 1096 to ensure their height does not infringe the aerodrome safeguarded surfaces of East Midlands Airport.
- xv The terms of reference and constitution for hosting a community liaison meeting during the construction and initial operational phases of the development.

The CEMP shall be implemented as approved throughout the construction and commissioning of the development.

Reason: To protect the environment and ensure construction works are carried out which minimise impacts to surrounding land users and ensure aircraft safety.

8. No development shall take place until the details of a Construction Noise Mitigation Plan setting out the use of best practice measures to mitigate and minimise construction noise levels is submitted and approved in writing by the WPA. The Construction Noise Mitigation Plan shall include but not be limited to:
- a. Identification of the methodology and frequency of noise measurement during the agreed construction hours;
 - b. Careful choice of piling rigs to minimise noise;
 - c. Avoiding unnecessary plant operation and revving of plant or vehicles;
 - d. Locating plant away from nearest sensitive receptors or in locations that provide good screening in the direction of sensitive receptors;
 - e. Use of broadband noise reverse alarms (where practicable) on mobile plant;
 - f. Careful handling of materials used in construction processes to avoid unnecessary noise;

- g. Use of appropriate noise silencing / noise reducing equipment for noisy elements of plant; and
- h. Ensuring plant and machinery are serviced and well maintained.

The construction works shall thereafter be undertaken in compliance with the approved Construction Noise Mitigation Plan.

Reason: To minimise noise impacts from the construction of the development so as to protect the amenity of nearby residential properties in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan. These details are required prior to the commencement of the development to ensure appropriate noise controls relating to the construction works.

9. In accordance with BS 5228:2009+A1:2014 'Code of Practice for Noise and Vibration Control on Construction and Open Sites' construction noise shall not exceed 65 dB $L_{Aeq,T}$ during the daytime (07:00 – 19:00 weekdays and 07:00 – 13:00 Saturdays) at the closest points to the curtilages of the residential sensitive receptors listed below and identified in Figure 7.1 of the Environment Statement, accessible by the applicant or his consultant as well as the WPA at a height of 1.2 m to 1.5 m above local ground height. The measurement should be in free-field conditions, e.g. at least 3.5 m away from the nearest reflecting surface other than the ground.

1. Red Hill Marina;
2. Red Hill Farm;
3. Middle Gate Farm;
4. Thrumpton Village;
5. Winking Hill Farm; and
6. Ratcliffe on Soar Village.

Reason: To minimise potential adverse impacts from construction noise in accordance with the requirements of Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.

10. Outside the hours of 07:00 – 19:00 weekdays and 07:00 – 13:00 Saturdays, construction activities shall only be carried out which are compliant with the following noise limits:
 - During weekday evenings between 19:00 – 23:00; Saturdays between 13:00 – 23:00 and Sundays between 07:00 – 23:00 the maximum noise limit from construction activities when measured at any nearby residential receptor shall not exceed 55 dB $L_{Aeq,T}$.
 - During the night-time on any day between 23:00 – 07:00 the maximum noise limit from construction activities when measured at any nearby residential receptor shall not exceed 45 dB $L_{Aeq,T}$.

Construction activities which exceed 55 dB LAeq,T when measured at any nearby residential receptor which cannot reasonably be halted once they have been commenced (such as concrete pouring etc.) are permitted to over-run into the evening and night-time period subject to the contractor taking all reasonable steps to manage the construction timetable to minimise any period of over-run to ensure the activity is completed at the earliest practicable opportunity.

Reason: To minimise potential adverse impacts from construction noise in accordance with the requirements of Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.

Ecology

11. Site clearance/preparation operations that involve the felling, clearing or removal of vegetation or disturbance of bare ground shall not be undertaken during the months of March to August inclusive unless otherwise agreed in writing by the WPA following the submission of a report detailing survey work for nesting birds carried out by a suitably qualified ecologist. In the event that breeding birds are identified, a Method Statement shall be produced detailing how works will progress (which may include delaying their onset).

Reason: In the interests of safeguarding nesting birds and to ensure compliance with the Wildlife & Countryside Act 1981.

12. A pre-commencement survey for badger setts shall be carried out on the land outside the power station site within 50m of the northern and eastern application site boundary to ensure that no new badger setts have been created. The results of the survey shall be submitted in a report and approved in writing by the WPA prior to the commencement of the development. In the event that badger setts are identified within this 50m zone, a method statement shall be produced detailing how works will progress which ensure the protection of badgers during construction works.

Reason: In the interests of safeguarding nesting birds and to ensure compliance with the Wildlife & Countryside Act 1981.

Archaeology

13. The development hereby permitted must not commence until Part A of this condition and, if required, Part B of this condition have been complied with.
 - a. Inspection of the geotechnical works by a suitably qualified geo-archaeologist shall be carried out to enable the deposit model to be updated accordingly. The model and interpretation shall be submitted to the WPA. Subject to the findings, should modern Made Ground

deposits extend across the Site, as confirmed in writing by the WPA, then no further archaeological evaluation is required.

- b. Should the model and interpretation confirm that undisturbed archaeological deposits extend across the Site, then a written scheme of archaeological investigation and mitigation (including the provision for palaeo-environmental work and scientific dating) shall be submitted to and approved in writing by the WPA. All work shall be implemented in full accordance with the agreed scheme. Part B will not be discharged until the final report on the archaeological investigation has been submitted to and approved in writing by the WPA.

Reason: To ensure that adequate archaeological investigation and recording is undertaken prior to mineral extraction taking place, in accordance with Policy W3.27 of the Nottinghamshire and Nottingham Waste Local Plan. The archaeological investigation scheme is required prior to the commencement of the development to ensure that any archaeological remains within the site are appropriately investigated.

Floodlighting

14. All floodlighting and other external lighting units proposed, including cowling enclosures for the completed buildings and site, shall be developed and operated in accordance with a detailed scheme previously approved in writing by the WPA. The scheme shall ensure light is not emitted from luminaires above the horizontal plane (i.e. no upward light spill), incorporate a lighting contour map to identify levels of lighting within the application site and any light spillage onto adjacent land and shall ensure that the external faces of the completed buildings and chimneys are not illuminated, with the exception of the aviation warning lights.

Reason: To ensure landscape, visual and ecological impacts are minimised in accordance with Nottinghamshire and Nottingham Waste Local Plan Policies W3.3, W3.4 & W3.22 and to ensure flight safety.

Capacity of Site

15. The maximum combined total tonnage of residual waste and solid recovered fuel imported on to the site in any calendar year shall not exceed 524,550 tonnes. For the avoidance of doubt a calendar year shall comprise the period between 1 January and 31 December. The site operator shall maintain a record of the tonnage of residual waste and solid recovered fuel delivered to the site per day, the numbers of HGVs delivering waste and the number of HGVs exporting residues and their destinations. Within 14 days of a written

request, a copy of the waste input report shall be provided to the WPA to demonstrate compliance or otherwise with the capacity limit of the site.

Reason: To ensure environmental effects of the development are no greater than identified within the Environmental Statement submitted in support of the application thereby ensuring compliance with Nottinghamshire and Nottingham Waste Core Strategy Policy WCS 13.

Hours of Operation

16. The development is permitted to operate on a 24-hour, 7 days a week basis. Potentially noisier activities associated with the process including HGV deliveries and activities undertaken outside the development buildings shall be prioritised to ensure they are undertaken during the core daytime periods of 07:00 – 19:00 Monday to Friday and 07:00 – 13:00 Saturdays. Operational activities outside these hours shall strictly comply with the noise limits imposed under Planning Condition 34.

Reason: To minimise noise impacts arising from the operation of the development and to protect the amenity of nearby residential properties in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.

Site Access and Traffic

17. Prior to the commissioning of the development, the access road identified on Drawing No. 1406_PL110: Proposed Site Layout Drawing received by the WPA on 16 July 2020 and detailed within the Transport Assessment (Plan 1.2) shall be constructed in full and surfaced with a hard-wearing tarmacadam topping. Following the commissioning of the development all traffic accessing the site shall use this approved access road to enter and leave the site from the A453 Remembrance Way – West Leake Lane junction (Eastern access) throughout the operational life of the development.

Reason: To ensure satisfactory access arrangements for the development thereby ensuring compliance with Nottinghamshire and Nottingham Waste Local Plan Policy W3.15.

18. The surfacing within the car park area shown on Drawing No. 1406_PL110: Proposed Site Layout Drawing received by the WPA on 16 July 2020 shall be agreed in writing with the WPA prior to its installation. Thereafter, the car park area including the three accessibility spaces and three electric vehicle charging spaces shall be installed in accordance with the approved details prior to the development first entering commissioning. The engineering works to construct the car park area shall incorporate a conduit network to

ensure the non-electric vehicle parking spaces are readily capable of being upgraded to provide electrical vehicle charging in future years.

Reason: To ensure adequate facilities are provided for off-street parking and manoeuvring in accordance with Policy WCS13 of the Nottinghamshire and Nottingham Replacement Waste Local Plan – Part 1- The Waste Core Strategy and Policy W3.14 of the Nottinghamshire and Nottingham Waste Local Plan.

19. The covered cycle storage facilities shall be installed in accordance with the details shown on Drawing No. 1406 PL410: Bicycle Shelter Plan and Elevations received by the WPA on 16 July 2020 prior to the development being commissioned and thereafter retained and made available for staff and visitors use throughout the operational life of the development.

Reason: In the interest of promoting sustainable travel and minimising adverse impacts associated with the operation of the development in accordance with the objectives set out within Chapter Nine of the National Planning Policy Framework.

20. The operator shall appoint and thereafter continue to employ or engage a Travel Plan Coordinator throughout the operational life of the development. The Travel Plan Coordinator shall prepare, submit and obtain the WPA's written approval of a Travel Plan aimed at promoting sustainable transport initiatives which shall include but not be limited to:

- i. Introduce transport initiatives aimed at reducing reliance on the private car as the principal means of staff transport to and from the development, including timelines for monitoring, review and implementation, to the written satisfaction of the WPA.
- ii. Include initiatives to promote education relating to sustainable travel, raise awareness of the problems car journeys can create, promote car sharing, reduce travel by car and promote the use of cycling and public transport.

Following the development becoming fully operational, the Travel Plan Coordinator shall submit an annual report to the WPA for the first five operational years of the development to set out the extent that the aims of the Travel Plan are being met and where appropriate identify revised initiatives including implementation dates in the event that the aims of the Travel Plan are not being met. The annual monitoring report shall be approved in writing by the WPA.

Reason: In the interest of promoting sustainable travel and minimising adverse impacts associated with the operation of the development in accordance with the objectives set out within Chapter Nine of the National Planning Policy Framework.

21. Detritus material from the development shall not be deposited on the public highway. Measures to prevent the deposition of detritus on the public highway shall include, but not be limited to, the sweeping and cleaning of on-site vehicle circulation and manoeuvring areas during the operational phase when required. In the event that these measures prove inadequate, then within one month of a written request from the WPA additional steps or measures shall be taken in order to prevent the deposit of materials upon the public highway, the details of which shall have previously been submitted to, and if applicable, agreed in writing by the WPA.

Reason: To prevent mud and other deleterious material contaminating the public highway and to accord with Policy W3.11 of the Nottinghamshire and Nottingham Waste Local Plan.

Site Drainage and Protection of Groundwater

22. Prior to the commencement of the development a surface water drainage scheme for the site based on sustainable drainage principles shall be submitted to and approved in writing by the WPA. The scheme to be submitted shall demonstrate:
- i. The utilisation of holding sustainable drainage techniques;
 - ii. The limitation of surface water run-off to equivalent greenfield rates;
 - iii. The ability to accommodate surface water run-off on-site up to the critical 1 in 100-year event plus an appropriate allowance for climate change, based upon the submission of drainage calculations;
 - iv. The ponds are surrounded by marginal vegetation (reedbed planting) to deter large waterfowl species from accessing them; and
 - v. Responsibility for the future maintenance of drainage features.

The surface water drainage scheme shall be implemented in accordance with the approved details. The management of these water bodies and specifically the measures taken to deter species of birds that are hazardous to aircraft shall be included in the Wildlife Hazard Management Plan for the development (as defined in condition 29).

Reason: To prevent the increased risk of flooding; to improve and protect water quality; to improve habitat and amenity; to ensure aircraft safety and avoid birdstrike issues; and to ensure the future maintenance of the sustainable drainage structures in accordance with the requirements of Policy W3.5 of the Nottinghamshire and Nottingham Waste Local Plan. The details are required prior to the commencement of the development to ensure drainage works are undertaken as part of the initial site engineering where appropriate.

23. Prior to being discharged into any watercourse, surface water sewer or soakaway system, all surface water drainage from parking areas and hardstandings shall be passed through an oil interceptor designed and constructed to have a capacity and details compatible with the site being drained. Roof water shall not pass through the interceptor.

Reason: To prevent pollution to the water environment and to ensure compliance with Policy W3.5 of the Nottinghamshire and Nottingham Waste Local Plan.

24. Any facilities for the storage of oils, fuels or chemicals shall be sited on impervious bases and surrounded by impervious bund walls. The size of the bunded compound shall be at least equivalent to the capacity of the tank plus 10% or, if there is more than one container within the system, of not less than 110% of the largest container's storage capacity or 25% of their aggregate storage capacity, whichever is the greater. All filling points, vents, and sight glasses must be located within the bund. There must be no drain through the bund floor or walls.

Reason: To prevent pollution of the water environment and to ensure compliance with Policy W3.5 of the Nottinghamshire and Nottingham Waste Local Plan.

Recovery Status of Development

25. Prior to the development being brought into use the operator shall submit to the WPA for approval in writing verification that the development has achieved Stage R1 Status through Design Stage Certification from the Environment Agency. Once operational alterations to the processing plant may be undertaken to satisfy Best Available Technique or continued compliance with R1.

Reason To confirm the recovery status of the development and ensure that the manages waste at a higher level of the waste hierarchy to comply with Policy WCS3 of the Nottinghamshire and Nottingham Waste Core Strategy

Use of Residual Heat

26. Prior to the commissioning of the development hereby approved:
- i. a scheme shall be submitted to and approved in writing by the WPA to identify a route for the supply of heat to the boundary of the site. Thereafter, the proposed route of the heat connection to the boundary of the site shall be safeguarded throughout the operational life of the development.

- ii. a review of the potential to utilise the residual heat from the process shall be carried out. The review shall incorporate further evaluation of the options to export recoverable heat from the process, developing the options identified within Appendix 4.2 of the Environment Statement, specifically incorporating feasibility/market analysis/market testing. The conclusions/findings of this appraisal shall be submitted to the WPA for its written approval including a programme for the implementation of any potentially viable options. The operator shall thereafter undertake all reasonable endeavours to commission all viable options following their approval in writing by the WPA. In the event that the WPA conclude that that viable heat recovery options are not currently available in the local area at the time of this review, the operator shall repeat the heat investigation process every three years during the operational life of the development.

Reason: To ensure that potential to recovery heat energy from the process is not prejudiced, thus satisfying the objectives of European and National Policy, notably the revised EU Waste Framework Directive the Waste (England and Wales) Regulations 2011.

Local Socio-Economic Benefit

27. Prior to the commencement of the development hereby approved, a scheme of measures to encourage where possible the use of local services and products during the construction and operation of the development shall be submitted to and approved in writing by the WPA. The scheme shall incorporate arrangements for the use of labour agreements to maximise the proportion of local construction workers, a recruitment/training programme with a focus on the closest job centres, and local procurement of products and services where possible. Thereafter the development shall take place in accordance with the approved scheme.

Reason: To deliver maximum benefits to the local economy in accordance with the objectives of Policy WCS12 of the Nottinghamshire and Nottingham Waste Core Strategy. The submission is required prior to the commencement of the development to ensure that the economic benefits to the local economy are delivered by both the construction and operation of the development.

Landscaping

28. Within one year following the commencement of the development, as notified under Condition 2a above, a landscape scheme for the site shall be submitted to and approved in writing by the WPA. The landscaping scheme shall include:

Hard Landscaping

- i. Proposed finished levels or contours;
- ii. Means of enclosure;
- iii. Car parking surfacing;
- iv. Other vehicle and pedestrian access and circulation areas surfacing;
- v. A timetable for implementation.

Soft Landscaping

- vi. Schedule of planting including species, plant sizes and proposed numbers/densities where appropriate;
- vii. Grass seed mixes;
- viii. Arrangements for cultivation and other operations associated with plant and grass establishment;
- ix. A timetable for implementation;
- x. Arrangements for a minimum of 5 years aftercare/post planting management.

The landscaped works shall be carried out in accordance with the agreed timetable. The soft landscape works shall thereafter be maintained in accordance with the approved management plan. Any trees, shrubs or planting that, within a period of five years after planting, die, are removed or, in the opinion of the WPA, become seriously damaged or diseased, shall be replaced in the following planting season with similar specimens to those originally approved, unless the WPA gives written consent to any variation.

Reason: In the interests of visual amenity and to ensure compliance with Policy W3.4 of the Nottinghamshire and Nottingham Waste Local Plan.

Protection of Aircraft Safety

29. Prior to the commencement of the development hereby permitted a Wildlife Hazard Management Plan shall be submitted to and approved in writing by the WPA. The Wildlife Hazard Management Plan shall include but not be limited to robust measures to deter species of birds that are hazardous to aircraft during the construction and operation of the development. The development shall be carried out and operated throughout its life in accordance with the approved scheme.

Reason: To prevent any increase in the number of hazardous birds in the vicinity of East Midlands Airport that could increase the risk of a birdstrike to aircraft.

30. Notwithstanding the provisions of Schedule 2, Part 14, Class K of the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended) (or any Order revoking and re-enacting that Order, with or without modification), no solar photovoltaic equipment may be mounted within the curtilage of the development hereby approved without the prior written approval of the WPA following engagement with the aerodrome safeguarding authority for East Midlands Airport.

Reason: To prevent ocular hazard and distraction to pilots using East Midlands Airport.

31. Prior to the commencement of the development hereby permitted, details showing the thermal modelling of emission plumes and the composition of the emissions shall be submitted to and approved in writing by the WPA in order to verify that the final design solution / plant specification meets the safety requirements of the East Midlands Airport operator (acting as the statutory aerodrome safeguarding authority).

Reason: To ensure aircraft safety is not compromised by the development.

32. Prior to constructing the chimneys which serve the development, a scheme for the installation of lighting on the chimney stacks which is visible to aircraft and compliant with European Aircraft Safety Agency (EASA) design guidance shall be submitted to and approved in writing by the WPA. The aircraft warning scheme shall thereafter be installed in accordance with the approved details and retained throughout the operational life of the development.

Reason: To ensure aircraft safety is not compromised by the development.

Protection for Footpath Users

33. Prior to the commencement of the development there shall be submitted to and approved in writing by the WPA a scheme for the protection of users of the public right of way and cyclepath which crosses the power station access road. The scheme shall incorporate arrangements for signage, road marking and other measures to warn and protect drivers, pedestrians and cyclists, including the timetable and arrangements with the NCC Highways department for their installation. The scheme shall thereafter be implemented in accordance with the approved details and timetable.

Reason: To protect users of the public right of way network and cyclepath in accordance with the requirements of Policy W3.26 of the Nottinghamshire and Nottingham Waste Local Plan. The footpath protection scheme is required prior to commencement of the

development to ensure that users are safeguarded through both the construction and operation of the development.

Noise

34. Operational noise from the development at any pre-existing residential receptors as listed in Condition 8 shall not exceed the maximum permissible levels detailed in the table below when assessed at a height of 1.2 m to 1.5 m above ground and at least 3.5 m away from the nearest reflecting surface other than the ground. This is to be determined either by way of direct measurement at the stated locations, or where extraneous ambient noise precludes this, by way of a combination of measurement and calculation.

Period	BS4142 Rating Level Limit
Daytime (07:00 – 19:00)	Representative Background $LA_{90,1h} + 4 \text{ dB}$
Evening (19:00 – 23:00)	35 dBA or representative background $LA_{90,1h} + 0 \text{ dB}$ (whichever is higher)
Night (23:00 – 07:00)	35 dBA or representative background $LA_{90,15 \text{ min}} + 0 \text{ dB}$ (whichever is higher)

The assessment of representative background sound level applicable to the above table should refer to Table 7.12 of the ES until such time as this has been updated following decommissioning of the Power Station. Following the decommissioning of the Power Station a further baseline noise assessment of representative background noise at the residential receptors shall be undertaken by the operator and the results of this noise survey shall be submitted to and approved in writing by the WPA, this data shall thereafter be used for measuring compliance with the noise limits set out above.

Reason: To regulate the level of noise emissions from the operation of the development to protect the amenity of nearby properties in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.

35. In the first year following the development becoming fully operational the operator shall undertake within the first 3 months a noise survey to verify compliance with the approved noise limits. A noise compliance monitoring scheme should be agreed in writing with the WPA prior to commencement of the noise survey to enable site contributory noise to be determined. This may involve monitoring at a near field position and agreed calculation method to show compliance. Measurements taken to verify compliance shall have regard to the effects of extraneous noise and shall be corrected for any such

effects. The results of the noise survey shall be submitted to the WPA within a written report for approval in writing. Should the results of the noise survey suggest that further mitigation measures are necessary these shall be identified within the report and implemented within a reasonably practicable timescale to be agreed and approved in writing by the WPA.

Reason: To regulate the level of noise emissions from the operation of the development to protect the amenity of nearby properties in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.

36. In the event of a justifiable noise complaint being received by the WPA, the operator shall, within a period of 30 days of a written request, submit a noise assessment to the WPA to demonstrate compliance or otherwise with the noise limits that have been imposed. If the prescribed noise levels are exceeded then the operator must incorporate as part of the noise assessment report a scheme of noise mitigation for approval in writing. The noise mitigation scheme shall thereafter be undertaken in accordance with the details approved by the WPA.

Reason: To minimise noise impacts arising from the operation of the development and to protect the amenity of nearby properties in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.

37. The loading doors to the tipping hall shall only be opened when required to allow HGV movements into and out of buildings, for maintenance or in an emergency. The loading doors shall be fitted with a fast-acting closing system that ensures they are closed immediately following the passage of a vehicle into and out of the building. Doors which allow the movement of personnel into and out of the buildings shall be fitted with self-closing mechanisms that ensure closure when people are not passing through.

Reason: To minimise noise and odour emissions from the operation of the development to protect the amenity of nearby residential properties in accordance with Policies W3.9 and W3.7 of the Nottinghamshire and Nottingham Waste Local Plan.

38. All plant/machinery shall be regularly maintained to ensure that noise emissions do not exceed the manufacturers' specifications.

Reason: To minimise noise impacts arising from the operation of the development and to protect the amenity of nearby properties in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.

39. Mobile plant machinery used on site must be fitted with broadband noise type reverse alarms at all times.

Reason: To minimise noise impacts arising from the operation of the development and to protect the amenity of nearby residential properties in accordance with Policy W3.9 of the Nottinghamshire and Nottingham Waste Local Plan.

Litter

40. Fugitive litter arising from the construction and operation of the development shall be minimised and shall not be permitted to escape the boundaries of the planning application site. The steps to be taken by the operator to control the discharge of litter shall include but not be limited to:
- i. During construction works, the erection of a boundary fence to curtail any litter windblown litter and regular collection of any fugitive litter emissions which may occur within the fenced off area.
 - ii. Following the commissioning of the development:
 - a. A permanent fence shall be erected around the boundary of the site before any waste is received by the development for processing. The fence shall be constructed in accordance with details which have first been agreed in writing by the MPA;
 - b. All waste received by the development shall be unloaded and stored within the building and there shall be no external storage of waste;
 - c. The doors which provide access to the loading hall shall operate using fast acting shutters and shall remain shut except for a minimum period to allow the passage of a vehicle into and out of the building. The fast-acting shutters shall be maintained in an operational condition throughout life of the development;
 - d. Regular inspections and litter picks shall be undertaken outside the buildings to remove any fugitive litter from the external areas.

Reason: To minimise nuisance caused from windblown litter in accordance with Policy W3.8 of the Nottinghamshire and Nottingham Waste Local Plan.

Dust

41. Fugitive dust emissions from the development shall be minimised as far as practicably possible. Measures to control the release of dust shall include but not be limited to:
- i. The use (as appropriate) of a dust suppression system within areas likely to give rise to fugitive dust emissions;
 - ii. The use as appropriate of water bowzers and/or spray systems to dampen the road sweepings bay, vehicle circulation and manoeuvring areas;

- iii. All vehicles transporting waste materials either to or from the development be fully enclosed or sheeted. Vehicles shall only be permitted to uncover waste loads within the loading hall and not from any other parts of the planning application site.

Reason: To minimise potential dust disturbance at the development and to accord with Policy W3.10 of the Nottinghamshire and Nottingham Waste Local Plan and ensure aircraft safety.

Odour

42. Odour emissions from the development shall be minimised as far as practically possible. Measures to control the level of odour emissions shall include but not be limited to:

- i. Regular movement of waste within the refuse bunker to ensure that material is circulated on a regular basis and is not allowed to decompose;
- ii. The operation of negative air pressure within the tipping hall area and an odour management system, which would draw air from the reception building, through a series of carbon filters (or similar);
- iii. The application of masking agents where necessary to neutralise any malodours;
- iv. No storage container, skip, sorted or unsorted waste material or residue of recycled materials or any other items shall be stored outside the buildings or on operational vehicles.

The odour control systems shall be utilised throughout the operational life of the development.

Reason: To minimise odour emissions and to accord with Policy W3.7 of the Nottinghamshire and Nottingham Waste Local Plan.

Controls over Future Development

43. Notwithstanding the provisions of Schedule 2 Part 7 Class L(a) of the Town and Country Planning (General Permitted Development) Order 2015 (or any future replacement order) the development shall not be extended or altered under the provisions of 'permitted development' until full details have been submitted to and approved by the WPA.

Reason: In the interest of visual amenity and the protection of the openness of the Green Belt and to ensure compliance with Policy W3.3 of the Nottinghamshire Minerals Local Plan and Green Belt policy incorporated within the NPPF Under the provisions of Schedule 2 Part 7 Class L(b) permitted development rights are retained to install plant and machinery.

Closure of the Development

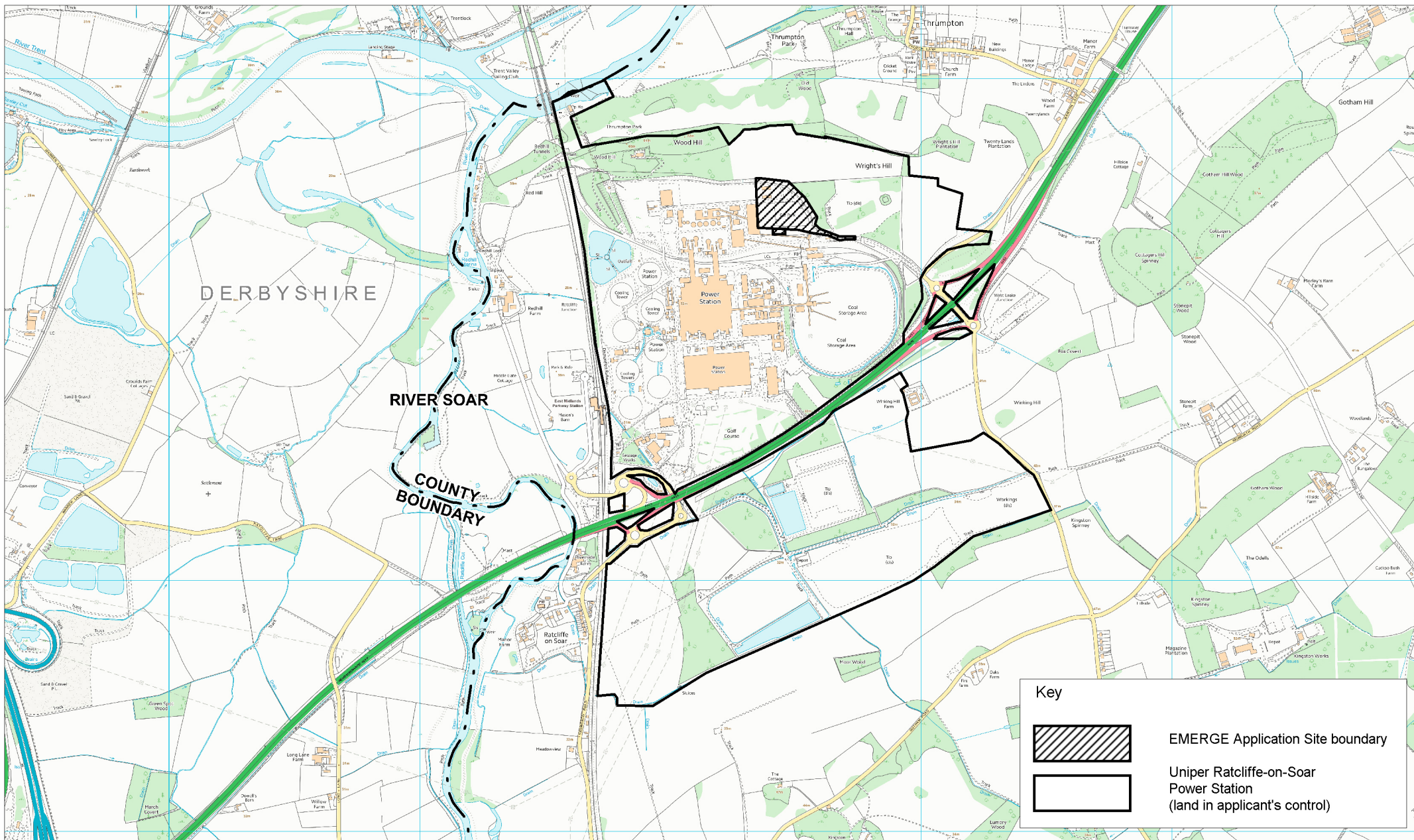
44. In the event that the use of the development for the importation of waste should cease for a period in excess of one month then, within one month of a written request from the WPA, the development shall be cleared of all stored waste.

Reason: In the interest of amenity and to ensure compliance with Nottinghamshire and Nottingham Waste Local Plan Policy W4.1.

Informatives/notes to applicants

1. The consent of Severn Trent Water will be required for either a direct or indirect connection to the public sewerage system under the provisions of Section 106 of the Water Industries Act 1991. Current guidance notes and an application form can be found at www.stwater.co.uk or by contacting Severn Trent Water New Connections Team (01332 683369).
2. Although statutory sewer records do not show any public sewers within the site there may be sewers which have recently been adopted under the Transfer of Sewer Regulations. Public sewers have statutory protection and may not be built close to, directly over or be diverted without consent and it is advised that Severn Trent Water should be contacted (0247 771 6843).
3. The High Speed 2 Project Team request the development maintain a dialogue throughout the design and development process and specifically in connection with the demolition phase of the two cooling towers to ensure that both schemes can co-exist whilst minimising any disruption.
4. The Applicant's attention is drawn to the new procedures for crane and tall equipment notifications, please see: <https://www.caa.co.uk/Commercial-industry/Airspace/Event-and-obstacle-notification/Crane-notification/>
5. With regard to the warning lights required to be installed on the flue stacks, the structure shall be illuminated by Medium Intensity Type C obstacle lights with additional lights equally spaced down the chimneys at intervals not exceeding 52 metres spacing. The top lights need to be located sufficiently below the top of the chimney to minimise obfuscation by smoke.
6. In relation to the updated information provided through the Regulation 25 submission, the future submission for the demolition of the cooling towers should incorporate a destructive asbestos survey, phase 1/phase 2 investigation of the site with remediation strategy and validation report, details of demolition plan and CEMP to prevent the demolition of the towers from contaminating the EMERGE site and other surrounding land and air and to ensure that changing / exposing the footprint of the towers does not create

any new pathways for contamination from soil, silt or other materials remaining within the tower footprints to impact on human health, controlled waters or any other environmental receptors.



**Nottinghamshire
County Council**

Proposed Development of the East Midlands Energy Re-Generation (EMERGE) Centre
(a multifuel Energy Recovery Facility, recovering energy from waste material) and associated infrastructure.
Ratcliffe-on-Soar Power Station, Nottingham, Ratcliffe-on-Soar, Nottinghamshire.
Planning Application No. 8/20/01826/CTY

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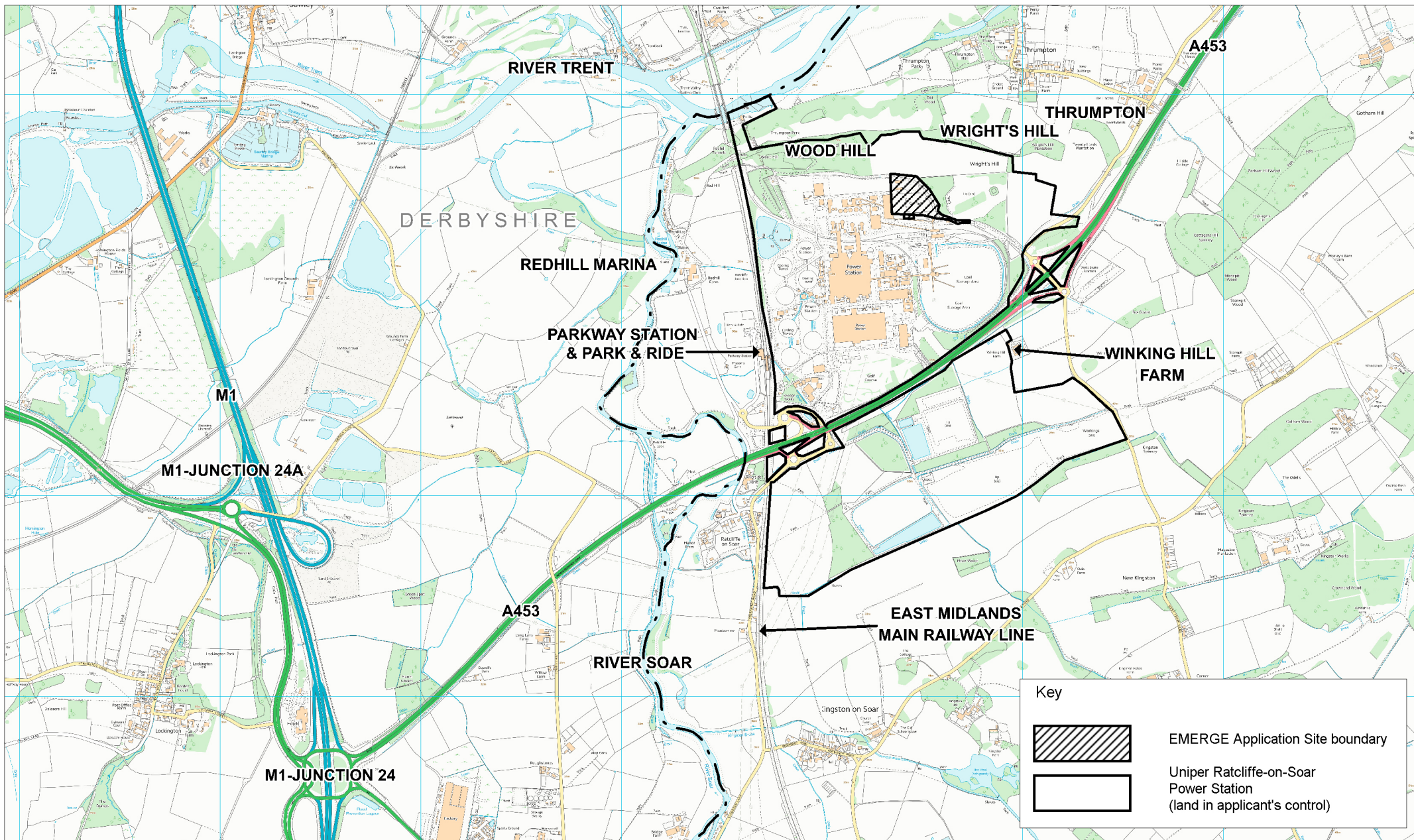
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Date: JUNE 2021



PLAN 1



**Nottinghamshire
County Council**

Proposed Development of the East Midlands Energy Re-Generation (EMERGE) Centre
(a multifuel Energy Recovery Facility, recovering energy from waste material) and associated infrastructure.
Ratcliffe-on-Soar Power Station, Nottingham, Ratcliffe-on-Soar, Nottinghamshire.
Planning Application No. 8/20/01826/CTY

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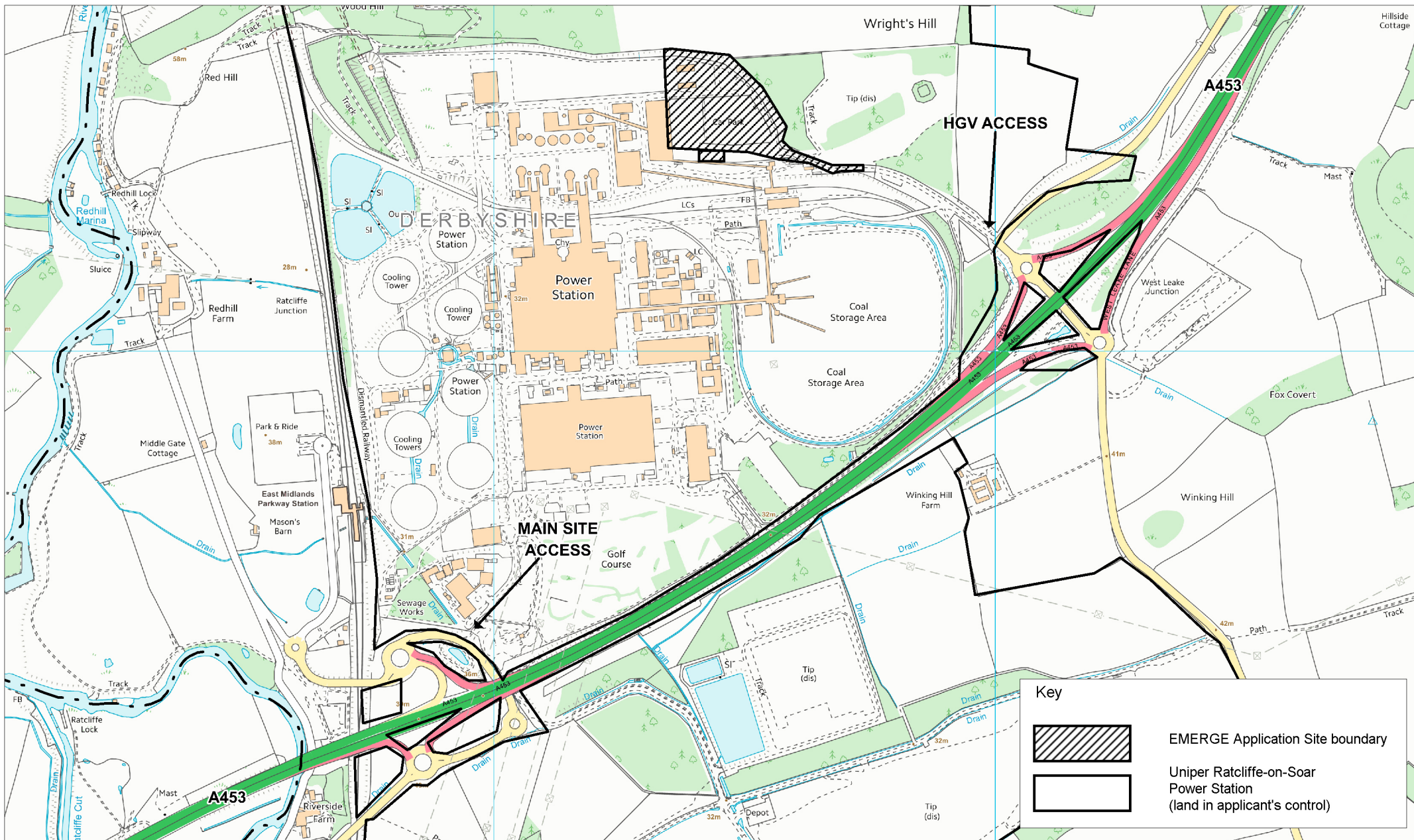
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PLAN 2



**Nottinghamshire
County Council**

Proposed Development of the East Midlands Energy Re-Generation (EMERGE) Centre
(a multifuel Energy Recovery Facility, recovering energy from waste material) and associated infrastructure.
Ratcliffe-on-Soar Power Station, Nottingham, Ratcliffe-on-Soar, Nottinghamshire.
Planning Application No. 8/20/01826/CTY

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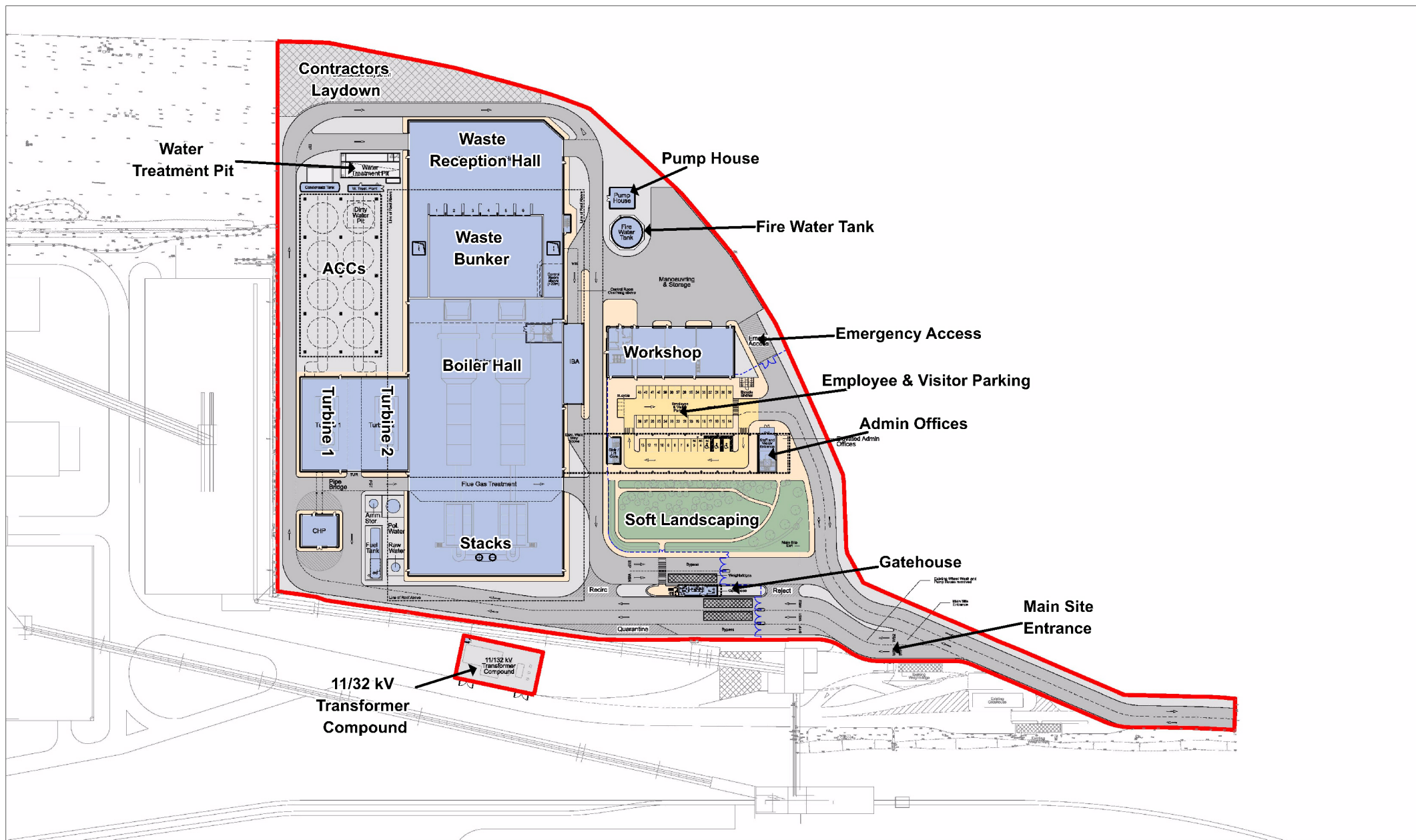
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PLAN 3



**Nottinghamshire
County Council**

Proposed Development of the East Midlands Energy Re-Generation (EMERGE) Centre
(a multifuel Energy Recovery Facility, recovering energy from waste material) and associated infrastructure.
Ratcliffe-on-Soar Power Station, Nottingham, Ratcliffe-on-Soar, Nottinghamshire.
Planning Application No. 8/20/01826/CTY

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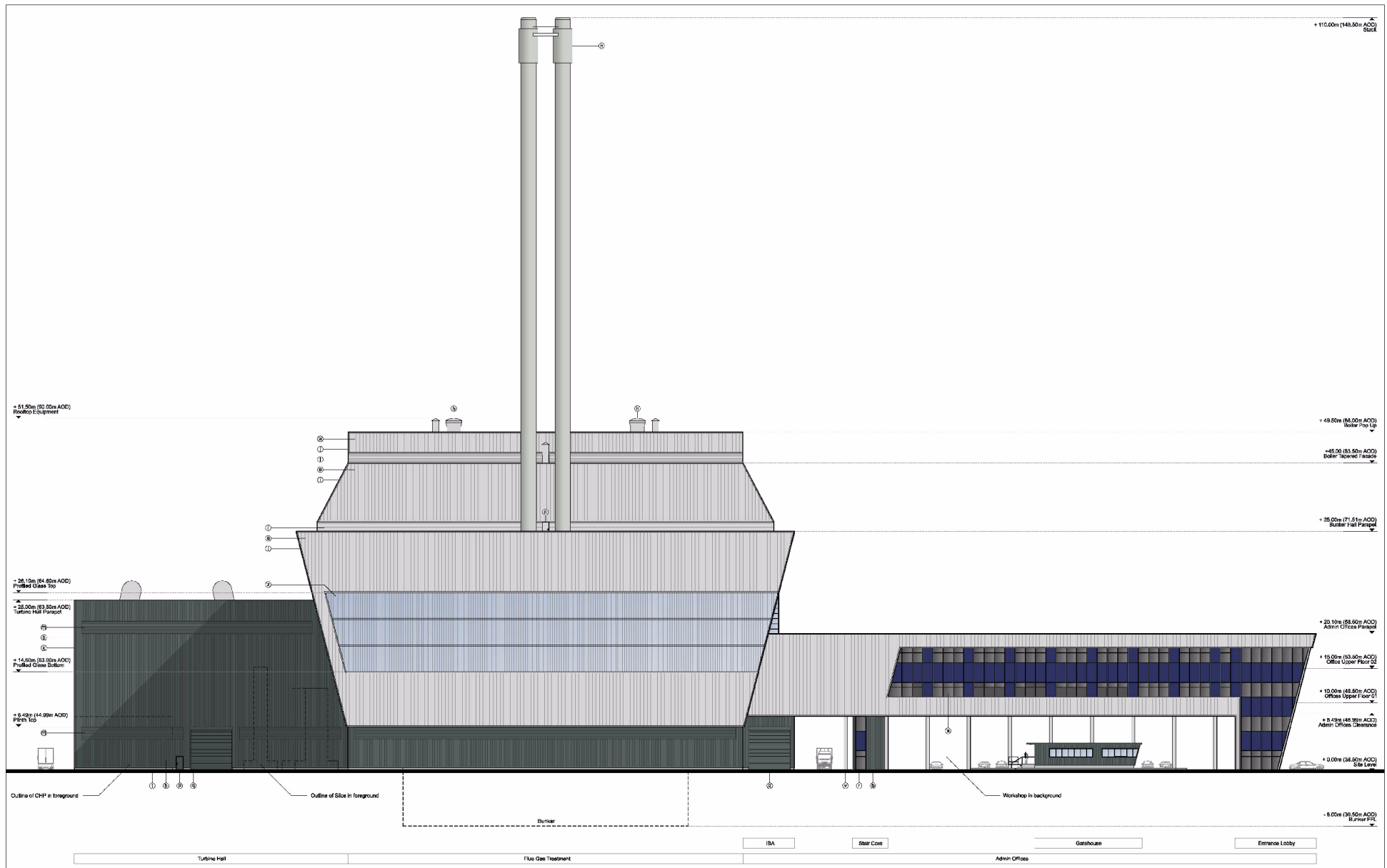
Not to Scale
(for illustration only)

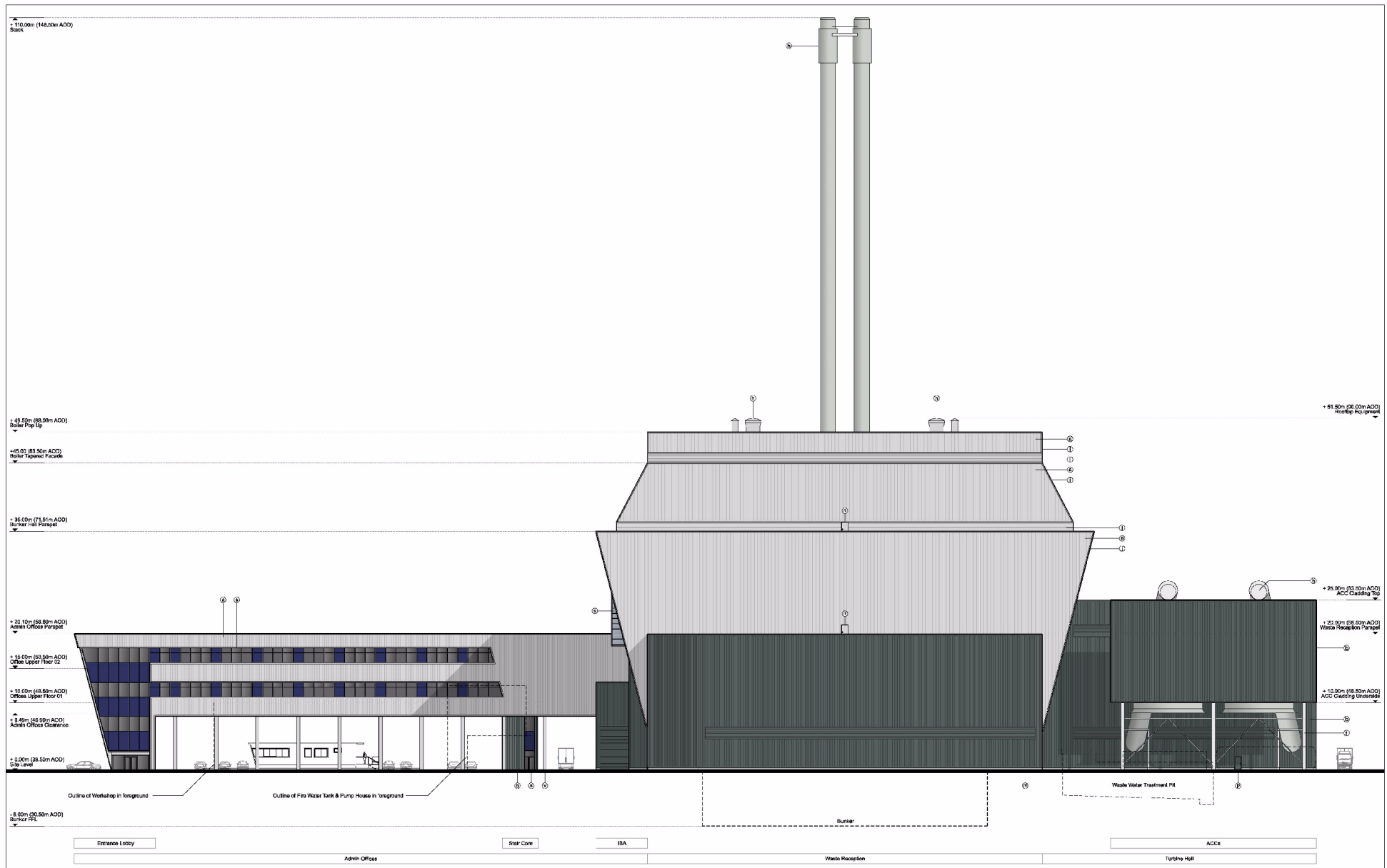
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PLAN 4





**Nottinghamshire
County Council**

Proposed Development of the East Midlands Energy Re-Generation (EMERGE) Centre
(a multifuel Energy Recovery Facility, recovering energy from waste material) and associated infrastructure.
Ratcliffe-on-Soar Power Station, Nottingham, Ratcliffe-on-Soar, Nottinghamshire.
Planning Application No. 8/20/01826/CTY

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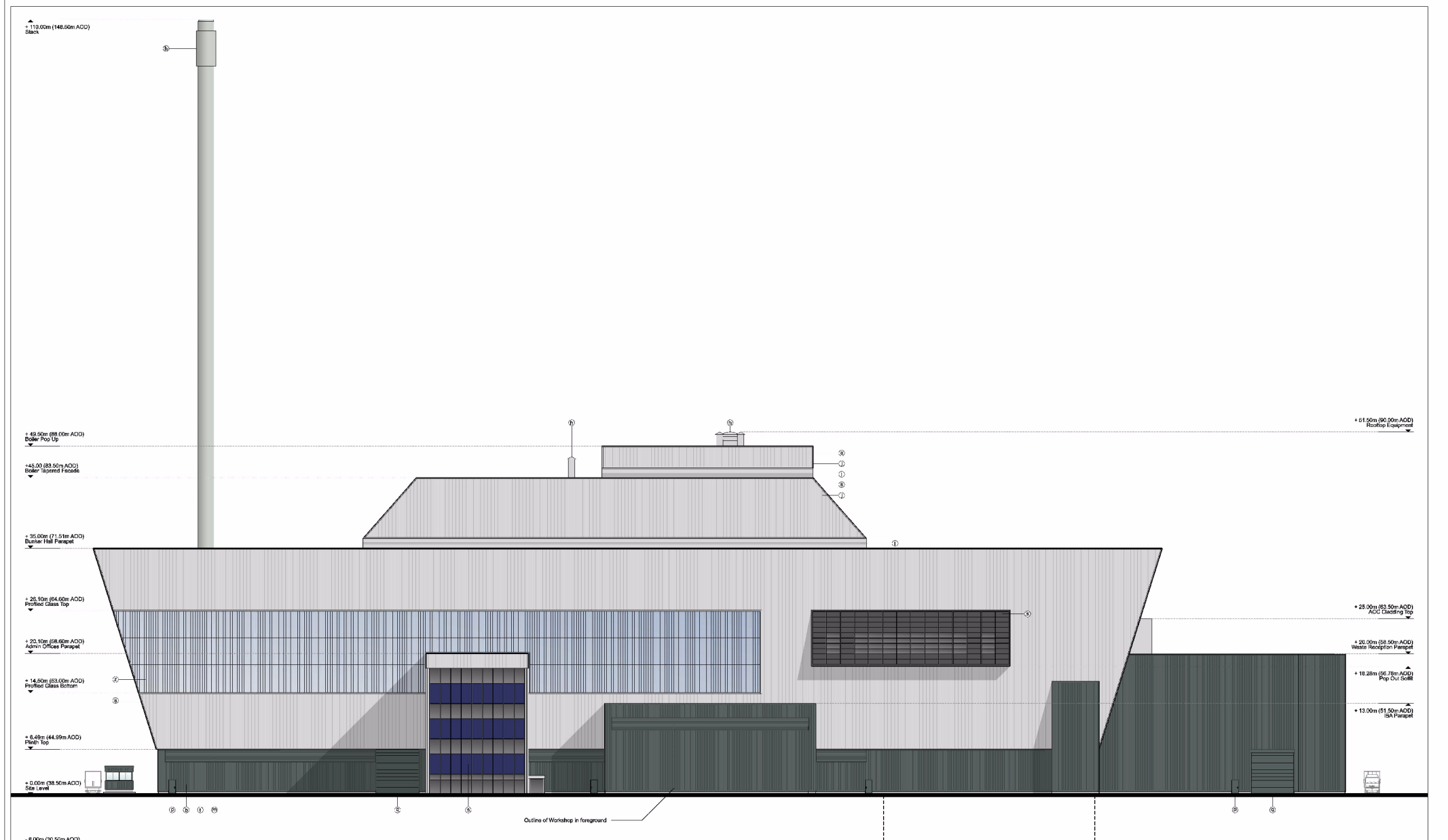
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PLAN 6



**Nottinghamshire
County Council**

Proposed Development of the East Midlands Energy Re-Generation (EMERGE) Centre
(a multifuel Energy Recovery Facility, recovering energy from waste material) and associated infrastructure.
Ratcliffe-on-Soar Power Station, Nottingham, Ratcliffe-on-Soar, Nottinghamshire.
Planning Application No. 8/20/01826/CTY

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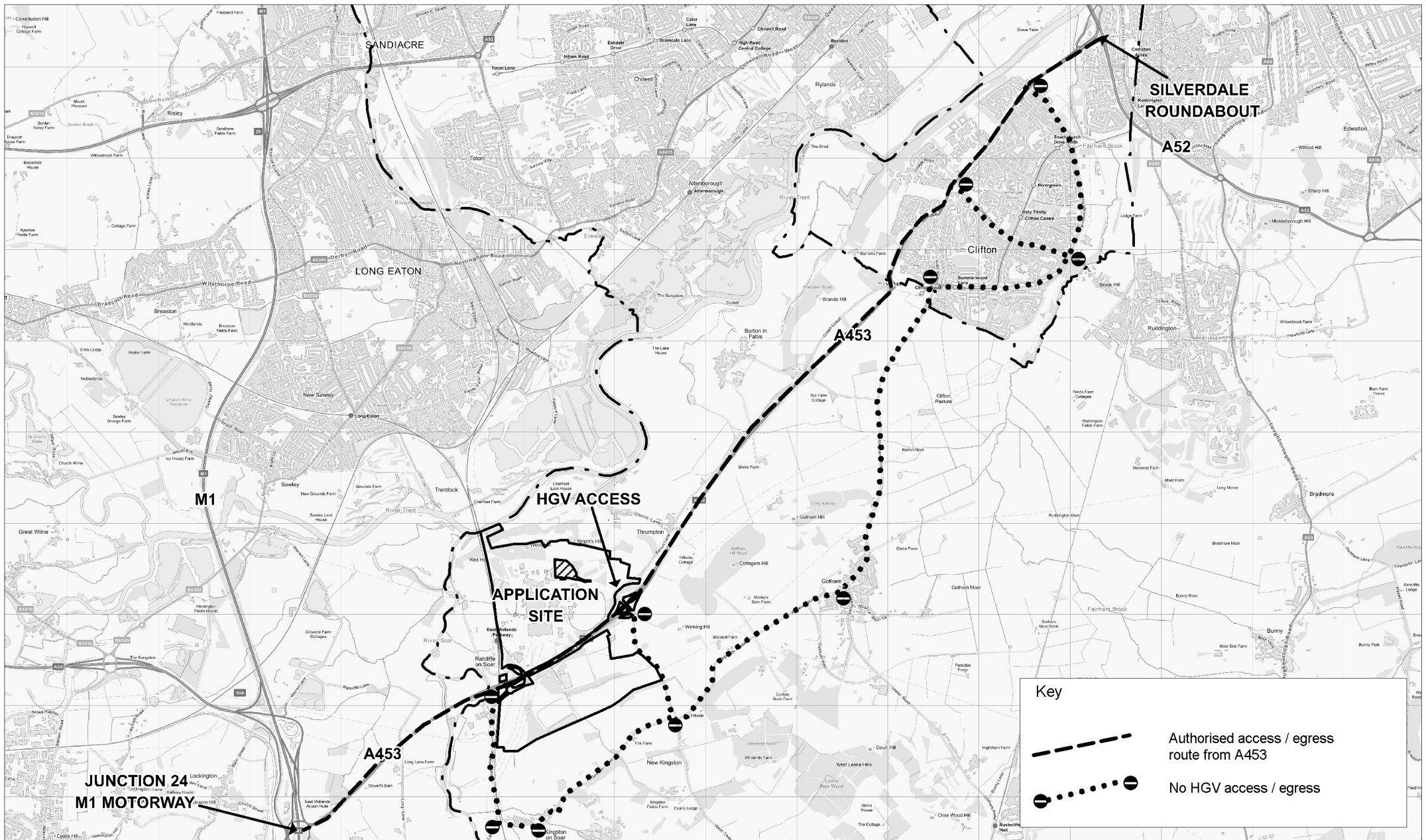
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PLAN 7



**Nottinghamshire
County Council**

Proposed Development of the East Midlands Energy Re-Generation (EMERGE) Centre
(a multifuel Energy Recovery Facility, recovering energy from waste material) and associated infrastructure.
Ratcliffe-on-Soar Power Station, Nottingham, Ratcliffe-on-Soar, Nottinghamshire.
Planning Application No. 8/20/01826/CTY

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PLAN 9