Planning Statement

Manchester AD Facility
New Smithfield Market

Issued: January 2014

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Client Name: Oaktech Environmental
Document Reference: C-13380-100-R-2-1-2-RSA
Project Number: CIV13380

Quality Assurance – Approval Status

This document has been prepared and checked in accordance with
Waterman Group's IMS (BS EN ISO 9001: 2008 and BS EN ISO 14001: 2004)

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		Final		

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1. Introduction

1.1.1 The area of the existing New Smithfield Market site proposed for the Anaerobic Digestion facility has previously been in use by the Market as a composting and waste transfer area.

1.1.2 Early discussions with New Smithfield Market representatives about the provision of an on-site Anaerobic Digestion Facility, resulted in the preparation and submission of a Feasibility study (title, Oaktech IBR Anaerobic Digestion Facility Proposal for New Smithfield Market), jointly prepared by Oaktech Environmental and Waterman Transport & Development Limited. Following submission of his report, approval was given for the preparation of detailed development proposals for a 16,500 tonne per annum Food Waste Anaerobic Digestion Facility and preparation and submission of Full Planning Application for the Facility.

1.1.3 3 Pre- Application discussions have been held with Manchester City Council's Planning Department and it is the outcome of these discussions that have be used as the basis for preparation of this Supporting Statement.

1.1.4 The proposed location for the AD facility is within operational land at New Smithfield Market, Whitworth Street, Openshaw, Manchester M11 2WJ, in an area currently identified for Waste Control and the Grower's Market. New Smithfield Market covers an area of 35 acres and provides enclosed storage units, trading halls and self-contained warehouse facilities to serve commercial traders in supply of market produce for Greater Manchester.

The Market reports that it has the best recycling rates of any wholesale market in the country, recycling approximately 70 per cent of all waste. This is achieved by working in partnership with FareShare to redistribute unwanted (fit for consumption) produce whilst sending unfit food waste produce offsite for processing as animal feed or for feedstock to a third party Anaerobic Digestion Facility.

The introduction of an on-site Anaerobic Digestion facility will thereby fit into the existing operational ethos of the Market whilst enabling the benefit of generation and use of renewable energy.

1.1.5 In developing our proposals, we have sought clarification with regard to the requirements of the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulation 2011. A Screening Opinion has been received from Manchester City Council Planning department in which it has been confirmed that, "The proposed development is considered to constitute a Schedule 2 10b) 'Urban Development Projects' scheme. However, following consideration of the proposed development it would not take place in an environmentally sensitive location or, following appraisal against the EIA guidance selection criteria within Schedule 3, give rise to significant environmental effects. Taking into account the submitted information and the EIA guidance thresholds it is Manchester City Council's formal

opinion that an EIA is not required to support the proposed development." A copy of the Screening Opinion is provided in Appendix 1.

1.1.6 The Screening Opinion does however require that the following issues are considered and support statements provided as supplementary documents to the Planning Application.

- Traffic Statement – Included text within this statement
- Contaminated Land and landfill gas survey – Appendix 2
- Demolition method statement – Appendix 5
- Bat survey – Appendix 3
- Air Quality assessment statement – Included text within this statement
- Noise assessment statement – Appendix 4

These issues are addressed within this document and, along with relevant plans and sectional drawings, a design and access statement, and the Planning Application form completes the information we understand to be required by the Planning Authority.

2. Site Description

2.1.1 The proposed AD development is to be located within south east corner of the New Smithfield Market site and cover an area of approximately 8,750m2. Vehicle access to the Anaerobic Digestion facility would be made from the existing internal road network within the market area and connection to the exiting Highway made via the exiting Market site entrance off Ashton Old Road.

2.1.2 The location of the proposed facility on the existing Market site is shown on Drawing No CIV 13380 SA-07-0001-A01 & /0002-A01 (See Appendix 6) These drawings also shows the Red and Blue line boundaries defining the Application site boundary and over site ownership boundary.

2.1.3 The area proposed for development of the Anaerobic Digestion facility is currently used as Waste transfer and Composting, Growers' Market wholesale warehouse and storage area and, open car parking. This part of the site has a sloping faced brick boundary wall running along the East boundary which retains the Highway at approximately 3 – 4m above the operational area of the Market sites. On the southern elevation of this part of the site, a fence positioned on along the back edge of the public footpath delineates the site boundary and a 2 -3m high sloping landscape embankment forms the make up between the Highway and lower operational site area.

2.1.4 The existing open areas of this part of the Market site are surfaced in 'tarmac' which is profiled to fall to a network of drainage gullies which connect into a surface water drainage system. This system also collects roof water from the existing storage buildings which run along the eastern boundary of this part of the Market site. Additionally, a foul drainage network is also in use within the site and both Foul and Surface water networks discharge into Public Sewers.

3. Planning History

3.1.1 A review of Planning History has been undertaken by desktop search of the information made available through Manchester City Council's website. This desktop search has shown 36 No previously approved applications which covered the following Market site changes:-

- Existing Building alteration and/or extension
- Single storey new building construction
- Two storey new building construction
- Demolition of Old Fish market building
- Construction of New Fish market building
- Erection of 10m high Composting Facility
- Change of use of existing buildings
- Sunday market car boot facility
- Pressure vessel erection (Calor gas bulk storage)

These applications, chart a history of continued development on the Market site as the site adapts to the changing needs of users and the Market owner's. The approval to introduce an on-site Composting Facility in 2004 to augment the Market's recovery and recycling strategy is perhaps the most significant historical application in the context of the proposed Anaerobic Digestion Facility.

4. Facility Description

4.1 Introduction

4.1.1 The Anaerobic Digestion (AD) Facility will comprise a main Reception and Process building together with a number of external process tanks and interconnecting pipework. The layout of the Site showing the proposed location of the building and tanks is shown on Drawing No. CIV13380-SA -07-0003 A04 (See appendix 6)

4.1.2 Waste handling and conditioning will be carried out within the Reception building, with the digestion process taking place within self-contained tanks located within an adjacent Process building. Biogas produced from the AD process will be collected and stored in an external gas holder and used in combined heat and power (CHP) gas engines to generate renewable electricity. Plant room, operational offices and amenity facilities will also be provided.

4.1.3 The proposed development is set out on the following plans which form part of the application (See Appendix 6);

- Planning Application Boundary (Drawing No. CIV13380 –SA-07-0001-AO1)
- Proposed Market site arrangement (Drawing No. CIV13380-SA-07-0002-AO1)
- Proposed Anaerobic Digestion site layout (Drawing No. CIV13380 –SA-07-0003-AO4)
- Proposed Lighting Scheme (Drawing No. CIV13380 –SA-07-0004-AO1)
- Proposed Vehicle Movements (Drawing No. CIV13380 –SA-07-0005-AO1)
- Proposed Anaerobic Digestion site sections and elevations (Drawing No. CIV13380 –SA-07-0006-AO1 & /0007-AO2)
- Proposed Anaerobic Digestion Office layout (Drawing No. CIV13380 –SA-07-0008-AO2 & /0009-AO1)
- Proposed Weighbridge Office (Drawing No. CIV13380-SA-07-0010 –AO1)
- Proposed Drainage Layout (Drawing No. CIV13380-SA-07-0011 –AO1)
- Topography Survey (Drawing No. CIV13380-SA-07-0012-AO1)

4.2 Anaerobic Digestion

4.2.1 AD is a natural biological process that breaks down organic material in the absence of oxygen to produce a biogas which has high methane content. The process produces two principle products;

- Biogas
- Bio-fertiliser

Biogas typically consists of 60% methane and 40% carbon dioxide and by combusting this gas in suitable gas engine/ CHP plants, renewable electricity and heat can be recovered for reuse.

Bio-fertiliser is a nutrient rich fertiliser that can be used as a replacement to fossil fuel derived fertilisers.

4.2.2 The design of food waste Anaerobic Digesters is based on four key principles:

- Robust design
- Reliability design
- Efficient operation and energy recovery
- Safe to operate

4.2.3 Anaerobic Digestion (AD) has a track record of success over many years with experience gained from operating such facilities as sewage sludge digesters, agricultural digesters and more recently, food waste digesters.

4.2.4 The Biogas produced from the proposed Facility will enable the production of up to 0.5MW electricity which will be used to power the Facility and for export (as Renewable Energy) into the National Grid. Heat recovered from the gas engines will also be recovered and used for space heating (if required) within the building and office areas and for process heating purposes.

4.2.5 The Anaerobic Digestion process, has been the subject of research and development over many years and from such work, an improved, efficient digestion process known as Induced Blanket Reactor (IBR) is now commercially available. The IBR system was originally designed to provide cost effective and reliable treatment of organic waste streams for farms and other agriculture industries but more recently, has been used as a treatment and recovery process for food waste

4.2.6 The Anaerobic Digestion Facility will include the following key processes:

- Waste reception
- Waste de-packaging, conditioning and maceration
- Mixing/Buffer tank conditioning and storage
- Anaerobic digestion
- Biogas recovery, collection and storage
- Digestate Pasteurisation
- Digestate dewatering and solids separation
- Liquid Digestate effluent treatment
- Energy generation

4.3 Food Waste Delivery

4.3.1 The proposed Facility is designed to process a range of commercial organic food wastes within an organic dry matter content range 15 to 30%.

4.3.2 The proposed designed throughput of the facility is 16,500 tonnes per annum of which, 3,000 tonnes per annum will be delivered to the facility directly from the Market. Commercial food waste will make up the balance of feedstock to enable the facility to generate 0.5 MWe of renewable electricity for parasitic use and for export to Grid.

4.3.3 Food waste will be delivered directly into the Reception building by Refuse Collection Vehicle (RCV's) or covered skip Lorries. All hauliers will be subject to the waste hauliers Duty of Care requirements, which will ensure that the loads are transported safely and correctly.

4.3.4 All waste delivery vehicles will report to the dedicated weighbridge office located at the entrance into the AD site where the Waste Transfer note will be checked and details recorded. Vehicles will then be directed to the Reception building for off-load within the building. There will be no direct public access or delivery of food waste to the facility

4.3.5 Following controlled tipping of the waste on to the Reception Hall floor, the material will either be temporarily stored or loaded into a de-packaging or shredder unit, for mixing and subsequent maceration and conditioning before transfer, by pipework, to the Mixer/Buffer tanks. The material will be visually inspected before loading into the front end conditioning equipment and obvious 'contaminants' removed

4.3.6 The Reception building will be kept at negative pressure and provided with an air management system and exhaust air, odour abated by use of filters.

4.3.7 All delivery vehicles leaving the site will leave via the weighbridge so that the Tare weight can be recorded

4.4 IBR Digestion Tanks & Buffer Tanks

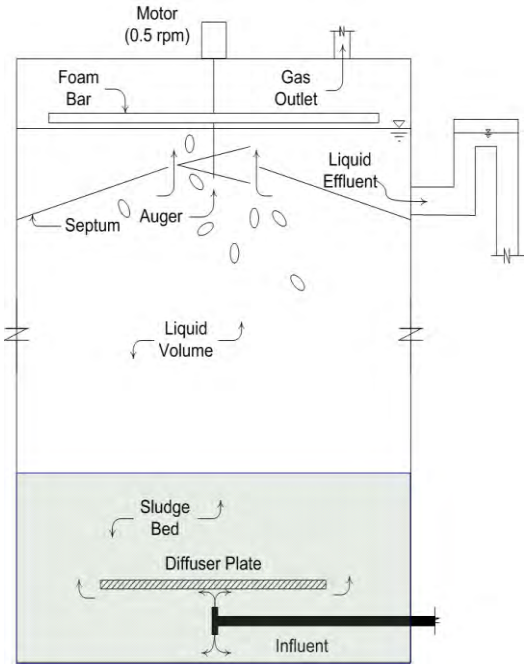
4.4.1 The macerated waste from the Conditioning plant will be transferred into the Mixer/ Buffer tanks (each 125 m^3 capacity). These tanks provide both further conditioning functions for the feedstock as well as buffer storage to enable appropriately 'conditioned' feedstock to be fed into each of the IBR anaerobic digesters at the correct organic loading rate.

4.4.2 The IBR tanks provide primary digestion of the conditioned feedstock. Tanks will be maintained at 50 – 60 C by use of internal recirculating heater coils. Each tank will have a processing capacity of 125m^3, enabling 16,500 tpa input feedstock to be processed

4.4.3 The IBR digestion process works on the principle of short Hydraulic Retention Time and therefore requires no internal mixing other than for foam skimming and gas collection purposes at the top of each tank

'Induced Blanket Reactor'

- Developed to solve problem of 'plugging' found when feeding solid material to UASB
- Proven for food and farm wastes
- Tolerant of high solids inputs
- High rate biological system – Quick digestion = lower storage requirement
- More biogas per tonne feedstock (70% CH_4)
- Single stage process: cost saving
- Multiple tank approach – ability to mix feedstocks
- Clean & inactive solid output
- Small physical footprint
- Modular and Scalable
- Automated control/Low Maintenance



4.5 Digestate Treatment

4.5.1 Digestate slurry recovered from the IBR process will be piped to secondary IBR treatment units where the product will be heated to a temperature of 72 C for a minimum period of 1 hour in compliance with PAS 110 requirements. This pasteurises the slurry and following subsequent dewatering, the separated solid fraction is collected for disposal off site. The liquid fraction will be retained on for reuse to hydrate the incoming feedstock and, following its further treatment, stored on site as grey water for reuse both within the AD Facility and within the wider Market site

4.6 Liquid Treatment

4.6.1 The liquid fraction retained from the dewatering process will be stored in 125m^3 effluent tanks and used (in part) as process water for conditioning of the incoming waste during maceration and mixing.

The excess liquid effluent (not required for process mixing) remains high in organic content and this liquid will be pumped to a 'tertiary' IBR digester where it will be maintained at 50 – 60 C. The effluent from this Wastewater digester will be transferred to a secondary pasteurisation array aerobic tank prior to storage on site as reusable grey water

4.7 Biogas Collection

4.7.1 The IBR process will produce a biogas (65% methane, 35% carbon dioxide). Biogas will be collected from all primary, secondary and tertiary process tanks to maximise the gas yield from the incoming food waste. Collected gas will be stored within an inflatable double membrane gas storage dome.

4.8 Power Generation

4.8.1 The biogas will be used as the fuel source for dedicated CHP gas engines. Two small 'Gen-sets' will be used to generate 500KW of electricity. A proportion of this electrical power will be used to supply the operational need of the AD Facility with the balance exported into the Grid

4.8.2 Low grade heat recovered from the gas engine water jackets and oil coolers will also be used assist with operational temperature control of the IBR's. The gas engine and electrical generator sets will be containerised in acoustic, weather proof enclosure and exhaust emissions from the 'Gen-sets' with silenced through dedicated stack silencers

4.9 Process Controls

4.9.1 The plant will be equipped with a comprehensive system of instrumentation and controls which will continuously monitor and control levels, pressures and temperatures. Normal operation of the digester will be fully automatic and will be controlled from a central panel located in the plant control room situated in the building.

4.10 Vehicle Access

4.10.1 The Facility will be served by a new dedicated vehicle entrance, located within the Market site to the south of the Grower Market. Access into the Market site will be made via the existing highway entrance off Ashton Old Road

4.10.2 2 Materials will be transported to the Site in sealed skips. Details of the vehicle movements expected to service with the AD operation are contained in the accompanying Transport Statement

4.10.3 Within the proposed planning application boundary for the AD Facility, an area of public car parking has been provided by way of compensating loss of existing car parking resulting from the development. Access into and from the car park, will be made via a dedicated entrance positioned adjacent to the AD Facility entrance/exit

4.11 Site Drainage

4.11.1 All surface water run-offs from the car parking area and external service yards will drain to a new catchment channels that will discharge to the existing surface water drainage system on the Market site. The surface water drainage scheme is shown on Drawing No CIV13380-SA-07-00011-A01 (See appendix 6)

4.11.2 The operation of the AD facility will be undertaken either within buildings or on concrete hard standing areas. All roof water from buildings will be collected and used as cooling or process

water in the AD plant or discharge to the existing surface water drainage system on the Market site.

4.11.3 All fuel will be stored in bunded areas to contain spillages.

4.11.4 Discharge of domestic foul drainage from the amenity facilities provided for operational site staff, will made via the Market site existing foul drainage network

4.12 Process Building

4.12.1 Elevations of the proposed buildings and structures are shown on Drawing No CIV13380 SA-07-0006 to /00010- A01 (See appendix 6)

4.12.2 The Anaerobic Digestion buildings occupy a footprint of approximately 2,125m^2, *as* shown on Drawing CIV13380 SA 07 0003 A01 and comprises a fully enclosed reception and conditioning building with attached workshop and office, an IBR process tank building, a secondary digestion and waste water treatment building and a solid digestate disposal building. Additionally, a brick - built dedicated weighbridge office will be provided located adjacent to the new weighbridge.

4.12.3 The main operational buildings will be provided with a curved roof profile to soften their visual impact whilst also providing the necessary operation height for waste reception, waste conditioning and waste digestion purposes

4.12.4 Buildings will be constructed from steel frame structures clad with metal profile sheeting colour as indicated on the drawings. The maximum building height will be 14.5m and the approximate building footprints will be as follows:

- Office building 265m^2
- Reception Building (including single storey Annex) 1010m^2
- IBR Process Building 800 m^2
- Secondary Process Building 210m^2
- Solid digestate disposal building 135m^2
- Weighbridge office 21.5m^2

4.13 External Process Equipment

4.13.1 External grey water storage tanks, each 125 m3 capacity, 9.2m tall by 4.2m diameter and a biogas storage dome (approximately 10m diameter) are the main external 'tank' structures that will be visible. The tanks will be clad with stainless steel cladding panels and the outer fabric of the gas dome will be the nearest colour equivalent to match the colour of the building cladding.

4.13.2 An operation gas flare will be provide to flare off biogas should gas engine availability (maintenance downtime) require although, by provision of two smaller gas engine units the use of the flare is expected to be as an emergency backup. The flare will be of stainless steel construction and be approximately 500mm dia and 7.0m in overall height.

4.13.3 Two small gas engine and generator sets will be provided. These will be housed in dedicated containers which provide secure, weatherproof and acoustic screening to the equipment. Each container will be approximately 16m long by 1.8m wide by 2.3m height. CHP enclosures will be finished to match the cladding of proposed process buildings.

4.13.4 It is envisaged that a small meter house will be required for export of electrical power via the Market's on site substation. The proposal will be to construct a single storey brick enclosure approximately 3m by 4m plan area and position this near to the entrance into the Facility.

4.14 Hours of Operation

4.14.1 Renewable energy generation will operate on a 7 day per week, 24 hour basis using both the Mixing/Buffer storage tank to regulate the flow of feedstock into the IBR's and the gas storage dome to adjust and regulate gas supply to the Gen-sets. Waste deliveries and front end waste processing will be restricted to the hours of 0800 to 1800 Mondays to Fridays and 08.00 to 16.00 Saturdays. No operational work other than for emergency maintenance will be undertake on Sundays and Public Bank/Public holidays.

4.15 Manpower and Supervision

4.15.1 The AD facility will require three full time operatives and a full time site manager to run the plant with other temporary staff brought in for the more major plant service and plant replacement activities.

4.16 Bio-aerosols

4.16.1 Bio-aerosols are commonly associated with composting processes as the biological decomposition leads to multiplication of micro-organisms. These micro-organisms can become airborne when the compost is handled creating bio-aerosols. Most micro-organisms associated with bio-aerosols (e.g. fungi and glucans) are found within vegetation and green waste. However, bio-aerosols are most likely to be produced when waste is moved, agitated and processed and therefore as all processing of food waste at the facility will be carried out in sealed buildings and the AD process within sealed tanks, bio-aerosol emissions will be negligible.

4.17 Noise & Vibration

4.17.1 The plant will be designed to minimise the impact of noise and vibration. All plant and equipment outside the building will not emit noise levels or vibration which would be noticeable above noise emitted from normal activities associated with the Market site. The CHP will be enclosed in a sound proof container and will emit noise levels less than 60 dBA at a distance of 25m. Food processing equipment will be located within the sealed building therefore any noise generated will not cause a nuisance beyond the boundary of the site.

4.18 Emissions

4.18.1 The Facility will be designed to contain spillages of food waste and processed material. All drainage inside the building will flow into main drainage sumps before being pumped to the Mixer/Buffer storage tanks. The process and storage tank area will be bunded to provide 110% storage of the largest tank.

4.19 Odour

4.19.1 Odour from operations within the main processing buildings will be controlled by provision of carbon filtration odour control systems. The Reception and Process buildings will be sealed and maintained at negative pressure to augment odour control and minimise odour escape. These buildings will also be provided with mechanically controlled vehicle roller shutter doors to ensure that they will only be open for shortest practical time and internal air management collector hoods will be located over open plant (loading hoppers) to maximise the collection and subsequent filtration of potentially odour laden air.

4.20 Site Lighting

4.20.1 The AD site will be illuminated by either wall mounted flood lights or column lighting poles. The locations of the proposed lighting heads and lighting specification are shown on Drawing No CIV13380-SA-07-0004 A01 (See appendix 6).

4.21 Landscape & Screening

4.21.1 Existing mature trees planted within grassed embankments provide the landscaping to the existing southern boundary of the site and this is repeated, in part, along the west and east site boundaries. Additional, screening is also provided by a 5m high brick retaining wall that runs along the east boundary of the site. This mix of grassed embankment and trees is to be repeated for the areas of new landscaping proposed for the Facility as shown on Drawing No CIV 13380-SA-07-0003-AO1 (See appendix 6).

5. Planning Policy Assessment

5.1 Introduction

In accordance with the Planning and Compulsory Purchase Act 2004, planning decisions are to be made with due regard to the "Development Plan, unless there are material considerations which indicate otherwise. Material considerations include national and regional planning policies.

The proposed Anaerobic Digestion facility is located within the administrative boundary of Manchester City Council and through the Local Development Framework the following Local Development Documents will be 'material considerations' in the determination of a planning application.

- Core Strategy Development Plan March 2012
- Greater Manchester joint Waste Development Plan April 2012
- Greater Manchester joint Minerals Plan April 2013

Additionally, Manchester City Council have produced a Guide to Development in Manchester, dated April 2007 which is a referenced Supplementary Planning Document

These documents are the Local Plan documents which complement the National Planning Policy Framework published in March 2012.

The key points of each document are set out below in so far as they relate to the Site and the proposed development.

5.2 Local Development Plan (Core Strategy)

The Core Strategy was adopted by Manchester City Council on 11th July 2012. It is the key document in Manchester's Local Development Framework and covers a period of 15 years from 2012 to 2027. It describes Manchester today and outlines the Council's vision for Manchester in 2027 along with the planning policies which will be used to deliver that vision. Manchester's Local Development Framework is a collection of planning documents and also includes:-

- The Local Development Scheme, the programme for document production
- The Statement of Community Involvement which sets out how consultation will be undertaken and in what format
- Development Plan Documents (to be developed following adoption of the Core Strategy), for example on Houses in Multiple Occupation
- Planning Documents (SPDs) which give more detail to policies in the Core Strategy or in any other future Development Plan Documents

Manchester adopted its Statement of Community Involvement in January 2007, the 'Guide to Development in Manchester SPD and Planning Guidance' in April 2007 and the 'Providing for Housing Choice SPD and Planning Guidance' September 2008.

The Core Strategy is divided into 3 broad sections which are titled

- **Manchester Now**
- **Local Strategic Context**
- **Strategic Objectives**

Within the Core Strategy, the following numbered Policies numbers are considered to have relevance to the proposed development of an Anaerobic digestion facility on the New Smithfield Market site:

EC 1 Employment and Economic Growth in Manchester

EC 2 Existing Employment Space

EC 5 East Manchester

EN 1 Design Principles and Strategic Character Areas

EN 4 Reducing CO2 Emissions by Enabling Low and Zero Carbon Development

EN 6 Target Framework for CO2 reductions from low or zero carbon energy supplies

EN 7 Energy infrastructure opportunities

EN 9 Green Infrastructure

EN16 Air Quality

EN 19 Waste

5.2.1 Core Strategy Policy EC 1 Employment and Economic Growth in Manchester states:

"Development proposals should have regard to:

Climate change resilience demonstrating how CO2 emissions will be minimised with an aim of zero carbon emissions, through energy efficiency, renewable energy and contributing to low and zero carbon decentralised energy infrastructure";

Ensuring design makes the best possible use of a site or building in terms of efficient use of space, enhancing the sense of place of the wider area and minimising detrimental impacts on adjacent uses, considers the needs of users/employees of a site/building for access via walking, cycling and public transport and reduction of opportunities for crime by applying current best practice in security design";

The proposed Facility will replace an existing open area waste sorting and composting facility and by so doing provide a contained, controlled environment for the processing of food waste, recovery of energy and reduction of CO2 emissions that would otherwise arise from the existing composting process.

5.2.2 Core Strategy Policy EC2 Existing Employment Space states:

"The Council will seek to retain and enhance existing employment space and sites.

Alternative uses will only be supported on sites allocated accordingly, or if it can be demonstrated that:

- *the existing use is un-viable in terms of business operations, building age and format;*
- *the existing use is incompatible with adjacent uses;*
- *the existing use is unsuitable for employment having had regard to the Manchester-Salford - Trafford SFRA; or*
- *on balance, proposals are able to offer greater benefits in terms of the Core Strategy's vision and spatial objectives than the existing use".*

The Anaerobic Digestion Facility wiil replace an existing operational Composting Facility and thereby reuse existing employment space.

5.2.3 Core Strategy Policy EC 5 East Manchester states:

"The Council will promote development which:

- *ensures major employment opportunities are connected via non-car modes to residential neighbourhoods within East Manchester and North Manchester, these include the City Centre, Central Park, Eastlands and railway stations in the City Centre;*
- *takes advantage of key transport infrastructure such as the arterial roads (Oldham Road, Ashton New Road, Ashton Old Road and Hyde Road) and public transport networks, such as bus routes and the proposed extension to Metrolink including two new lines and new stops;*
- *creates links to the Rochdale and Ashton Canals and links to the open space network including the Rochdale and Ashton Canals and the Medlock Valley, providing opportunities for walking and cycling to economic development opportunities;*
- *has regard to listed buildings and conservation areas including Ancoats and the industrial heritage of the area".*

Operating an Anaerobic Digestion Facility on the New Smithfield Market site will enable the food waste arising from the operation of the Market as well as District food waste arisings from Commercial operators to be processed and energy recovered for export as Renewable Energy. The location of the site is adjacent to a key arterial road (Ashton Old Road).

5.2.4 Core Strategy Policy EN 1 Design Principles and Strategic Character Areas states:

"All development in Manchester will be expected to follow the seven principles of urban design, as identified in national planning guidance" and, "have regard to the strategic character area in which the development is located. Opportunities for good design to enhance the overall image of the City should be fully realised, particularly on major radial and orbital road and rail routes. Design and Access Statements submitted with proposals for new development must clearly detail how the proposed development addresses the design principles, reinforces and enhances the local character of that part of the City and supports the achievement of the Core Strategy Strategic Objectives".

Central Arc Character Area

"The character of the area we have today is predominantly one of 1960's social housing estates and zoned industrial areas bisected by the transport network and largely resulting from the comprehensive redevelopment of the past. Significant areas of employment are found where this area overlaps with the fringe of the City Centre such as at Strangeways which is a large, distinctive, entirely industrial area suitable for further employment growth.

Much of the Central Arc is experiencing regeneration with some contemporary urban solutions, for example in Hulme, now complete, and some still to be progressed.

The opportunity exists for development on a large scale using innovative urban design solutions. These should use District Centres and key nodes of public transport as focal points and involve existing communities.

The opportunity should also be taken to use the canals to create a distinctive urban environment and enhance access through the City".

The built environment in the vicinity of the Market site is a mixture of industrial warehousing, office facilities and in a wider context urban housing areas. The Anaerbic Digestion facility will mirror the visual appearance of and industrial warehouse and its associated office complex which will be keeping with the more general character of the visual landscape in the vicinity of the Market site.

5.2.5 Core Strategy Policy EN 4 Reducing CO2 Emissions by Enabling Low and Zero Carbon Development states:

"The Council will seek to reduce fuel poverty and decouple growth in the economy, growth in CO2 emissions, and rising fossil fuel prices, through the following actions:

All development must follow the principle of the Energy Hierarchy, being designed:

- *to reduce the need for energy through design features that provide passive heating, natural lighting and cooling*
- *to reduce the need for energy through energy efficient features such as improved insulation and glazing*
- *to meet residual energy requirements through the use of low or zero carbon energy generating technologies*
- *wherever possible new development and retrofit projects, including energy generation plant, must be located and designed in a manner that allows advantage to be taken of opportunities for low and zero carbon energy supplies.*
- *where possible new development and retrofit projects will be used as a mechanism to help improve energy efficiency and provide low and zero carbon energy supplies to existing buildings.*
- *where appropriate new development and retrofit projects will be required to connect to and/or make contributions to low or zero carbon energy schemes and/or to incorporate provision to enable future connection to any existing / potential decentralised energy schemes.*
- *the use of building materials with low embodied carbon in new development and refurbishment schemes* ".

The Anaerobic Digestion Facility will be generating Renewable Electricity for the Biogas that it will produce. This electricity will provide the power to operate the Facility with surplus power exported to the Power Grid. The Biogas will also be used to provide the energy source for on-site heating requirements (office space) and for process heating.

5.2.6 Core Strategy Policy EN 6 Target Framework for CO2 reductions from low or zero carbon energy supplies states:

"The target framework relates to three broad development locations and their potential for low and zero carbon, decentralised energy. The areas are defined as follows:

- *Target 1 Network development areas: Locations where the proximity of new and existing buildings, the mix of uses and density of development provide the right conditions to support district heating (and cooling).*
- *Target 2 Electricity intense areas: Locations where the predominant building type has an all-electric fit-out such as retail units and leisure complexes.*
- *Target 3 Micro-generation areas: Locations where lower densities and a fragmented mix of uses tend to mean that only building scale solutions are practical.*

Minimum % target requirements for Non Domestic Buildings:

- *Target 1: Network development area CHP/district heating anchor or connection or where not feasible, a 15% increase on Part L 2010*
- *Target 2: Electricity intense buildings +10%increase on Part L 2010*

  (Applies to commercial uses with a high proportion of emissions from electricity use (>45 kg CO2/m2))
- *Target 3: Micro generation area +15% increase on Part L 2010"*

The Facility will generate all its own power requirements and export electrical energy into the Grid. The operational efficiency of the plant requires that heat energy is conserved through digester tank insulation and pipe insulation and that electrical generation is optimised through quality of the Biogas and efficiency of the generator set.

5.2.7 Core Strategy Policy EN 7 Energy infrastructure opportunities states:

"All new development will be expected to be adaptable to climate change in terms of the design, layout, siting and function of both buildings and associated external spaces. In achieving developments which are adaptable to climate change developers should have regard to the following, although this is not an exhaustive list:

- *Minimisation of flood risk by appropriate siting, drainage, and treatment of surface areas to ensure rain water permeability*
- *Reduction in urban heat island effect through the use of Green Infrastructure such as green roofs, green walls, increased tree cover and waterways*
- *The need to control overheating of buildings through passive design*

- *The opportunity to provide linked and diverse green space to enhance natural habitats which will assist species adaptation*

Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO2 mitigation under Policy EN6, subject to sufficient evidence to quantify their contribution to compliance".

The Market site is not located within a Flood Risk zone and is well served by a network of existing drainage. The Anaerobic Digestion Facility will require a significant amount of process water and the proposal will include for harvesting water from the Reception building and Process hall roof for reuse.

Additionally, the pasteurised and treated post digested process water will be available for use on the Market site to use to reduce their own process water demands.

5.2.8 Core Strategy Policy EN 9 Green Infrastructure states:

"New development will be expected to maintain existing green infrastructure in terms of its quantity, quality and multiple function. Where the opportunity arises and in accordance with current Green Infrastructure Strategies the Council will encourage developers to enhance the quality and quantity of green infrastructure, improve the performance of its functions and create and improve linkages to and between areas of green infrastructure. Where the benefits of a proposed development are considered to outweigh the loss of an existing element of green infrastructure, the developer will be required to demonstrate how this loss will be mitigated in terms of quantity, quality, function and future management.

Key features of Manchester's green infrastructure will include:

- *The continued development of a network of green spaces, water bodies, canals, paths and cycleways, with priority given to those parts of the City where there is an identified existing lack of open space. The Council will seek to protect existing street trees and promote new planting, particularly where this can enhance green links in the urban area.*
- *The continued maintenance and management of the Rivers Mersey and Irwell and their tributaries, for example the River Irk, River Medlock, Chorlton Platt Gore, Gatley Brook, Moston Brook and adjoining land, with regard to their multiple functions including recreation, flood management, and biodiversity.*
- *The provision of new, and improvements to the quality and accessibility of existing green infrastructure assets, to mitigate for any loss of green infrastructure as a result of development such as the Metrolink extension programme.*
- *The encouragement of green roofs, green walls, tree planting and other forms of green infrastructure to allow for the adaption to climate change in heavily urbanised areas.*
- *New green infrastructure provision should be an exemplar of best practice and innovation in terms of both its design and management".*

The existing site provides limited scope for landscaping but by way of mitigating the slight loss of landscape area brought about by the development of the Anaerobic Digestion Facility, an area of landscape planting will be provided.

5.2.9 Core Strategy Policy EN16 Air Quality states:

"The Council will seek to improve the air quality within Manchester, and particularly within

Air Quality Management Areas, located along Manchester's principal traffic routes and at Manchester Airport. Developers will be expected to take measures to minimise and mitigate the local impact of emissions from traffic generated by the development, as well as emissions created by the use of the development itself, including from Combined Heat and Power and biomass plant.

When assessing the appropriateness of locations for new development the Council will consider the impacts on air quality, alongside other plan objectives. This includes cumulative impacts, particularly in Air Quality Management Areas".

The Anaerobic Digestion Facility will handle and process food waste within buildings or enclosed tanks and pipework. Where the waste is exposed to air (Reception Hall and Front End process areas) odour management will be provided. This is considered to be an improvement on the current Compost operations carried out on the site.

5.2.10 Core Strategy Policy EN17 Water Quality states:

"With reference to the Manchester-Salford-Trafford SFRA and other relevant documents:

Development should avoid any adverse impact on water quality, including during the construction phase, and wherever possible should seek to enhance water quality, both chemical and ecological;

Development should minimise surface water run-off from development and associated roads, and maximise the use of appropriate sustainable drainage systems, to minimise groundwater contamination, and to avoid pollutants reaching watercourses;

Development close to a watercourse should also ensure that waste or litter cannot enter the watercourse from the site;

Development should, where feasible and appropriate, seek to open up any culverted or hidden watercourse beneath the site to improve the ecological status of that watercourse".

5.2.11 Core Strategy Policy EN19 Waste states:

"The Council will:

- *Work with other Districts through the Greater Manchester Joint Waste Development Plan Document (GMJWDPD) to safeguard existing sites for waste management and identify and safeguard new sites in existing areas of employment where appropriate.*
- *Require all developers, including those of new waste management facilities within the District, to demonstrate the proposal's consistency with the principles of the waste".*

Replacing and upgrading the food waste handling and food waste processing facility of the site by provision of an Anaerobic Digestion Facility will provide a regulated means for food waste 'disposal' whilst maximising the recovery of useable energy from this waste stream.

5.3 Supplementary Planning Documents

Within the Supplementary Planning Document and Planning Guidance the following paragraphs are considered to be relevant to the application for planning approval

Design

"UDP Part 1 Policies H2.7, I3.1 and S2.5 all deal with the City Council's expectation that new development, whether for residential, industrial, commercial or retail purposes, should have a high standard of design making a positive contribution to the City's environment. UDP"

Environmental Standards

"Developers will be expected to submit a statement on how their proposal will achieve the environmental standards set out in this chapter. This statement will be seen as an addition to the Design and Access Statement referred to in Government Circular 1/2006 and described in greater detail in paragraph 13.9 of this document. This additional

Environmental Standards Statement will be required for all planning applications, both outline and full, with the exception of changes of use where no operational work is required, house extensions and mining or engineering work. (The exceptions listed do not of course negate the need for building regulations approval, where necessary). It will clearly assist in demonstrating how the planning policy context has affected the development of the site as required in the process of producing the Design and Access Statement".

Renewable Energy

"To reduce energy demand and the harmful impact of using energy from non-renewables, in line with UDP Part 1 Policy E1.5, developers should aim for at least 20% of final site energy demand to be met by on-site renewable energy technologies. Renewable energy targets can be achieved more readily by undertaking the measures suggested above to reduce the total energy demand of the building. It is possible to produce developments that use 50% and even 100% energy from renewable sources. To achieve this, developers should:

- Assess opportunities for integrating small and large scale renewable energy generation systems **(i)** to improve the energy security of occupants and the neighbourhood, including siting of energy generation businesses on-site and export of surplus energy
- Use a mix of technologies to help generation patterns match demand
- Investigate energy generation opportunities before designing building envelopes or fixing their location, to optimise utilisation of wind, solar and geothermal resources
- Consider final energy demand rather than building energy consumption in the selection and sizing of generation equipment

- Explore opportunities to tackle waste and energy issues collectively through use of anaerobic digesters linked to CHPs (Combined Heat and Power devices)
- Consider private wire networks as an alternative to grid connection and availability charges on larger developments".

Environmental Design

"To demonstrate energy efficiency in non-residential developments, the City Council would encourage developers to use the Building Research Establishment Environmental Assessment Method (BREEAM) which is used to assess environmental performance. Developments should be achieving a design and post-construction rating of "very good." However, using alternative modelling tools that enable the developer to exceed the requirements of BREEAM is also encouraged".

Construction Management

"UDP Part 1 Policy E1.6 requires the building materials used in new development and refurbishment schemes to be environmentally friendly wherever possible, and encourages the use of recycled building materials, which is also energy efficient. Site waste management plans should, therefore, be implemented to reduce the quantity of waste generated, and to increase re-use and recycling. Opportunities for reuse of existing structures should be explored, and where this is not appropriate, materials should be reused on site and incorporated into the new design where practicable. Materials that are environmentally friendly, of low embodied energy, locally sourced, and can be recycled or reclaimed when the building comes to the end of its life should be prioritised. Materials that contain environmentally damaging chemicals should be avoided".

Parking Guidelines

"UDP Part 1 Policy T3.9 gives priority to pedestrians, disabled people and cyclists above the needs of the car, and developers must take this into consideration in the location and design of any parking facilities. Developers will be expected to submit Travel Plans where appropriate to encourage and support walking, cycling and public transport use. It is understood that new developments may also need to have some car parking for the users' needs. This section provides more detailed guidance on how the need for car parking can be accommodated in the context of ensuring that priority is still given to the non-car user".

5.4 Greater Manchester Joint Waste Development Plan

With reference to the Greater Manchester Joint Waste Development Plan Document the following policies are relevant to a proposal to construct and operate a small scale Anaerobic Digestion Facility for the treatment and energy recovery from organic biodegradable waste from the commercial and industrial waste stream

5.4.1 Policy 1 Commercial and Industrial Waste: Energy Recovery states:

"Planning permission will be granted for energy recovery in accordance with the identified capacity requirements".

In this context the following commentary and guidance is provided within the document:

"In order to work towards the Government's objectives of sustainable development, protecting human health and the environment and enabling communities to take responsibility for their own waste, Greater Manchester will need to find more local sites for the provision of built facilities if it is to successfully manage waste that arises within the conurbation. This will reduce the volume of residual waste that finds its way to landfill and land raising sites. However, Greater Manchester will also need to provide solutions for disposing of its final residual waste in the most appropriate sustainable manner".

"The purpose of the Waste Plan is to set out a waste planning strategy to 2027 which enables the adequate provision of waste management facilities in appropriate locations for municipal, commercial and industrial, construction and demolition and hazardous wastes".

"*This strategy will not be implemented directly by the local authorities. It will be for the private sector to come forward with proposals on individual sites which will then require planning permission. Although the Waste Plan provides an indication of the types of facilities likely to be suitable for a particular site/area, technologies for dealing with waste are changing rapidly and the Waste Plan will provide policies to guide this development and protect public interest*".

5.4.2 Policy 8 Requirement for Combined Heat and Power states:

"Applications for waste management facilities that have the potential to utilise biogas or energy from waste fired technologies will be required to provide combined heat and power unless it can be demonstrated that this would prevent the development of waste management facilities that have the potential to deliver important waste infrastructure.

In cases where an applicant considers that it would not be feasible to provide combined heat and power it will be the responsibility of the applicant to clearly demonstrate the reasons for this position".

In this context the following commentary and guidance is provided within the document:

"The purpose of this policy is to ensure that applications for waste management facilities incorporate opportunities for sustainable energy recovery wherever practicable".

"Tackling climate change is a key Government priority for the planning system and a critical new driver for waste management. In a supplement to Planning Policy

Statement 1 'Planning and Climate Change', the Government sets out how planning should contribute to reducing emissions and stabilising climate change by helping to shape places with lower carbon emissions that are resilient to climate change".

"Most forms of waste represent a massively under-utilised resource for generating renewable energy as an alternative to importing hydrocarbon fuels.

Policies for renewable energy in planning are set out by the Government in Planning

Policy Statement 22, which says that Local Development Documents, such as the

Waste Plan, should contain policies that promote and encourage, rather than restrict, the development of renewable energy resources".

"*The Government's Waste Strategy 2007 states that 'recovering energy from waste which cannot sensibly be reused or recycled is an essential component of a well-balanced energy policy".*

"Greater Manchester faces a challenge to build a low carbon economy and deliver decentralised energy. A study on how Greater Manchester could meet this challenge has been undertaken. This study identified the use of decentralised CHP as having the potential to provide heat and power to Greater Manchester.

Policy 8 will therefore enable the Waste Plan to complement the Greater Manchester

Energy Action Plan and District's energy policies when they are developed".

The current proposal is for the Anaerobic Digestion facility to provide Electrical Energy for export to the Grid and use some of its Heat Energy for process purposes. Spare heat could be made available for use on the Market site and whilst this option has been favourably received by the Market, the initial development proposals are based on electrical generation.

The Government has made a commitment to work towards a 'zero waste' economy in the Coalition Programme for Government of May 2010, and introduced measures to increase energy from waste through anaerobic digestion (AD). Defra has published a Framework Document (30th November 2010) which set out the steps to achieve this.

Following further consultations with industry, the Anaerobic Digestion Strategy & Action Plan for England was published in conjunction with the Waste Review. Within this document the following abstracts from the Executive summary are reproduced:

"The Government's Structural Reform Plans of 16 July 2010 therefore included an action to 'set out steps to promote increased energy from waste through anaerobic digestion'. The Department for Environment, Food and Rural Affairs (Defra) incorporated this into its Business Plan and published on 30 November 2010 a Framework Document which aimed to set out the steps necessary to increase energy from waste through anaerobic digestion".

"The Strategy does not set specific targets or regional strategies for the adoption of AD. The Action Plan should help ensure there are no unnecessary obstacles to the development of AD, by addressing the barriers that have been identified by industry representatives during this process. There may also be some separate adjustments to the incentive regimes. Together, this should increase the growth rate of AD. However, it will ultimately be up to local authorities, communities and industry to decide which technologies are most suitable for their waste and energy needs".

5.4.3 Policy 10 Unallocated Sites states:

"Applications for waste management facilities on unallocated sites will be permitted where the applicant can demonstrate that:

- *The proposal fits within the spatial strategy set out in the Waste Plan and contributes to the Waste Plan aim and objectives; and*
- *The proposal meets the same assessment criteria as allocated sites".*

Additionally it is stated: *"The purpose of this policy is to provide a positive and flexible approach to the delivery of waste management facilities, allowing for emerging technologies to come forward and future waste management facilities to be appropriately located".*

6. Planning Assessment

6.1.1 Based on the review of the Local Development Plan, the Screening Opinion and other material considerations, the following issues are considered relevant to the proposed development of an anaerobic digestion facility on the New Smithfield Market site:

- Need for Development
- Air quality
- Noise and Vibration
- Landscape
- Ground Contamination
- Traffic Assessment
- Drainage and Hydrology
- Bat Survey
- Other Material Considerations

Each of the above planning issues has been considered in detail below.

6.2 Need for Development

The development will make an important contribution in meeting the Council's need for a facility that generates energy from renewable resources and also, make a notable contribution to sustainable resource management within the Greater Manchester area. The proposed Facility has the potential to achieve a contribution of around 16,500 tonnes annually to the treatment of commercial food waste. This will contribute to the achievement of recycling and recovery rates of this waste stream and further promote the Government stated objective to increasing energy from waste through Anaerobic Digestion and the aim of working towards a zero waste economy.

In addition, the facility will make a valuable contribution to the generation of renewable energy from commercial and indusial waste and the strategic objective *"for waste management facilities to incorporate opportunities for sustainable energy recovery wherever practicable" The Facility will also contribute to reducing carbon emissions from the current composting operations on and off the site* thus, contribute to the overall aims in respect of tackling climate change.

The selection of Smithfield Market Site for construction of the Facility is in part driven by Site operator requirements to upgrade the existing Composting Facility but also, in this location, the Facility can serve as an embedded treatment hub for the local Business and the nearby District Centre.

Based on the above, it is concluded that the proposed development accords with Policy EN4 of the Core Strategy and Policies 1, 8 and 10 of the Greater Manchester Joint Waste Development Plan together with the guidance in National Planning Policy Framework.

6.3 Air Quality

A quantitative Air Quality assessment has not been carried out as part of the information submitted with the Planning Application.

However, from experience of design, construction and operation of food waste Anaerobic Digestion Facilities a qualitative assessment can be made. It is recognised that odour and dust from proposed site operations could present a nuisance, if they are not managed effectively and controlled by appropriate mitigation procedures. The management of odour and dust from the operational site will therefore include the following mitigation measures:

- covering vehicles to minimise the potential release of fugitive odour emissions
- during transportation;
- unloading and processing activities at the site will be carried out inside the
- proposed processing building to prevent the release of odour from vehicles;
- the process buildings will be sealed and controlled under negative pressure to
- minimise the release of odour and the process building extraction will then be
- passed through a bio-filter, which is effective removing odours from this type of
- process;
- Good housekeeping measures such as ensuring all doors are kept closed,
- provision of vehicle and wheel washing facilities and the regular washing down
- of the service yard area; and
- Regular inspection and maintenance of the facility.

As the proposed Facility is to replace an open composting area it is considered that betterment in the local air quality (odour and dust) will result.

A review of the vehicle trip generation data for the proposed development has not identified the need for detailed assessment of traffic related emissions and this potential source can be regarded as insignificant.

6.4 Noise and Vibration

The effects of noise and vibration from the operational phase of the proposed Anaerobic Digestion facility have been assessed by Peak Acoustics LTD. The assessment has been undertaken with reference to British Standards and national and international guidance on noise and vibration impacts as well as comparisons to the previously permitted scheme. The Noise Assessment is presented at Appendix 4.

The Noise Assessment utilised the background noise levels for the Site to provide a noise calculation for the proposed development taking into account the layout, configuration and nature of operational use.

A noise assessment to BS4142 carried out to assess the potential noise impact arising from the proposed development, deemed the main source of noise arising from the site will be from

HGV activity to and from site as the noise from the day to day operations on Facility will be contained and thereby be minimal.

Following site measurement of existing background noise levels, noise level limits associated with vehicle movements servicing the Market site have been established. These noise limits, as measured at the nearest dwelling, are 52.9dB between 07:00hrs – 23:00hrs and 34.8dB between 23:00 – 07:00.

The report concludes that noise arising for operational site activity or vehicles servicing the Facility should not exceed 67.9dB between 07:00hrs – 23:00hrs and 49.8dB between 23:0hrs – 07:00hrs,

6.5 Landscape

The area of the existing site proposed for the development of the Anaerobic Digestion Facility is a mixture of tarmac paving, concrete hardstanding and low level single storey brick warehouse units. The eastern boundary of the site are has a sloping Brick boundary retaining wall and a section of sloping grassed bank to make up the difference in level between the public highway (public footpath) and the Market site. The southern boundary has a similar grassed embankment area with a timber boundary fencing adjacent to a public footpath.

The existing sloping embankments are currently have established trees providing additional screening to the site and the proposed development will keep these existing areas of sloping embankment and tree screening and as indicated on the submitted drawings provide an additional tree planted area to further enhance screening of the Facility

Based on these proposals the overall visual impact of the proposed development is not considered significant and is within keeping with the character of the local landscape.

It is considered that the proposals comply with Policy EN9 of the Core Strategy.

6.6 Bat Survey

Further to notification that a Bat survey was required as part of the Environmental Impact Screening report as issued by Manchester City Council a survey of the site was made on 4th November 2013 by The Tyrer Partnership This survey concluded that no physical evidence of use by bats has been located on or within the building at New Smithfield Market. Copy of survey results included within Appendix 3.

6.7 Asbestos Survey

A Stage 2 Demolition and Refurbishment survey has been carried out on the buildings identified for demolition as part of the Anaerobic Digestion development. This survey was carried out by Manchester City Council and in recognition of its findings a Stage 3 Demolition and Refurbishment survey will be carried out during the detailed design stages of the development. Copy of the Stage 2 survey results included within Appendix 5.

6.8 Traffic Statement

6.8.1 Existing Site

New Smithfield Market is located in the Openshaw area of Manchester (2.5 miles east of centre) and is a working wholesale market for commercial users. The application site is at the south east corner of the market, which currently comprises a waste composting / sorting operation (hardstanding), areas of car parking and existing market buildings (units 'E13 – E22'). The site area excluding reinstated car parking is approximately 7033 sq m.

The site is located in a built up area, bounded mainly by industrial / commercial areas, but with residential streets to the south and east. Generally retail and some commercial businesses are located on Ashton Old Road (A635) just to the north of the site.

The development site is located wholly inside of the Markets secure boundary. Access to the site is therefore via either the Markets North Gate (on Whitworth Street East), or South Gate (on Lawton Street). The site is located closest to the Market's South Gate, however access / operational measures mean that service access will operate mainly via the north gate and the Market's internal service roads.

6.8.2 Surrounding Highway Network

Access to the site will primarily be via the Market's North Gate entrance to / from Whitworth Street East and the A635 Ashton Old Road. The A635 is a main arterial route on the east side of Manchester providing direct access to Manchester centre or the M60 Manchester orbital motorway.

Chapman Street is the primary route south from the site towards the A57, but is a traffic calmed route through a residential area and subject to 7.5T weight restriction (midnight – 8am). A 2.3m physical width restriction exists just prior to its junction with the A57, making it unsuitable for use by commercial vehicles. A route is available to the A57 via Chapman Street, Cross Lane, Garratt Way and Whitwell Way, but is not recommended for commercial use, being largely through traffic calmed residential areas and subject to noted 7.5T restriction.

Bus Stops are located on the A635 approximately 350m north of the site from which frequent services can be accessed. Bus Stops are also located on Ogden Street approximately 100m from the site, from which less frequent services can be accessed.

6.8.3 Development Proposal

It is proposed to construct an Anaerobic Digestion (AD) Facility within the boundary of the New Smithfield Market as shown on drawings CIV13380-SA-07-0001-A01 & /0002-A01 (See appendix 6). The operational site will process food wastes from the market and other local sources to produce methane gas in turn used for the generation of electricity.

The AD site will consist of an operations building (food reception / processing), tank farm, gas storage biome, water storage tank, yard area, car parking, weighbridge and office building (see site layout drawing).

Being located wholly within the boundary of the New Smithfield Market, access to the AD site will be via the existing local highway network linking to the Market. Access within the Market will be via the existing internal circulation roads to a controlled gatehouse with weighbridge for commercial vehicles. All vehicles will enter and leave the site in forward gear (the yard area providing turning space for commercial vehicles).

As discussed above, it is proposed that the primary operational access to the site will be via the Markets North Gate;

- Proposed site entry route – A635 onto Widnes Street (west approach via Oakley St & South St) and right into Whitworth Street East to access the Markets North Gate
- Proposed site exit route (primary) – North Gate left turn only to Whitworth Street East giving access to the A635 (direct left turn / or right turn via Oakley St & South St)
- Proposed site exit route (secondary) – South Gate into Lawton Street and left onto Cross Street provides left only restricted access to the A635 Ashton Old Road (i.e. westbound).

The AD facility will replace a number of commercial buildings, existing waste processing / composting operation and parking areas as follows;

- 2100 sq m waste composting yard
- 1230 sq m (approx.) B8 commercial units (10 no warehouse buildings; Block E, Units 13 – 22)
- 57 parking spaces

6.8.4 Site Operations

29 parking spaces will be provided for the Market as replacement spaces for the loss of parking noted above. This area of parking will be independently accessed off the Markets internal circulation roads.

The proposed AD facility will employ an expected 4 operations staff. Up to 10 staff will also be employed in the office building which will provide a company administrative function and is not directly associated with the site operation. A total of 11 on-site parking spaces will be provided to serve operations and office staff.

The proposed AD facility will have capacity to process 16,500 tonnes of waste per annum. 3000 tonnes of which is expected to be generated by the Market itself, with the remaining balance of 13,500 tonnes brought to site from external sources.

Transfer of Market waste to the AD site is expected to be managed wholly on-site (i.e. will not require off-site arrivals to transport waste).

The food waste imported to the site will be delivered over an expected 5 day working week and half day on Saturdays (am), with operations maintained for 52 weeks of the year. The assessed typical daily arrival of waste loads to the site is therefore;

13,500 / (51x5.5) = 48 tonnes per day import at average 5t payload per RCV = 10 arrivals per day

Some import of waste may be via bulk artic HGV delivery, though this has been ignored in calculating trip rates.

The AD process will generate a proportion of solid waste. This is expected to generate no more than 1 skip load per day (after treatment / drying) for disposal off-site.

Liquid effluent will be treated on site and discharged to sewer.

Combining all of the above provides the following summary of expected arrivals to the site;

- 4 cars (staff – operations)
- 7 cars (staff – office)
- 10 RCV (waste import)
- 1 RCV / Skip (dry waste export / disposal)

The same number of vehicles will form the total number of daily departures (i.e. total 2-way movements = 44 vehicles; 22 arrivals & 22 departures daily)

6.8.5 Traffic Generation

The daily rate of vehicle movements as above is therefore expected to be low. Arrivals and departures of waste loads can be managed to avoid peak traffic times and for operational considerations will be distributed throughout the day to manage materials handling.

Site operation (waste activities) will be during normal business hours, 11 waste vehicle arrivals and 11 departures would be at a rate of 2 – 3 vehicles per hour throughout the day.

We do not have information on the specific trip generation of the existing site facilities which are to be removed under the proposed development. Using TRICS data to assess traffic flows associated with buildings E13 – E22 (excluding existing waste composting operation) provides a daily traffic flow (total 2-way movements for 1230 sq m warehouses) of 28 vehicles.

The scale of the existing waste / composting operation is not known but is assumed to operate at a proportionally significantly lower level than the proposed development. Allowing for 2 employees and 2 commercial vehicle arrival / departure / day, the total 2-way trip generation of the existing site is assessed to be 36 vehicles.

The proposals will also see an overall net reduction in parking spaces at the Market of 17 spaces but this reduction is offset by the removal of the commercial units E13 – E22.

The proposed development is therefore assessed to generate a similar / marginally increased level of traffic generation in comparison to the previous site uses. The predicted trip rates onto the local highway network as a result of the development proposal would be minimal and not perceptible to existing road users. It is therefore reasonable to conclude that the proposed development would not have a material impact on the surrounding highway network.

The proximity of bus stops on Ogden Street and the A635 (less than 400m walk) make access to bus services feasible for site staff.

The proposals for the AD development are considered acceptable in highway and transportation terms for planning approval.

6.9 Drainage and Hydrology

A number of controls have been incorporated in the design of the scheme to reduce the risk of potential contamination to the groundwater or surface water during the operations phases of the Facility. These controls include:

on-site service yard drainage collection system will be installed, linked to the surface water drainage system on the Market Site via suitable oil interceptors, rain water falling on the buildings will be collected and used in the AD process, process operations undertaken either

within buildings or on concrete hard standing areas where potentially contaminated process will can be collected and reused within the process, prior to direct discharge to the adjacent surface water system all water will be routed through an oil interceptor - discussions will be undertaken with the Environment Agency to assess the opportunity to re-use treated water in the processes,

- fuels areas will be bunded to contain spillages
- Tank areas will be bunded to contain spillages
- Process water treatment (post pasteurisation) will be carried out and resulting grey water discharged to public sewer or where agreed with the Environment Agency used as wash water on the Market site.

In light of the controls set out above, it is concluded that the proposed development will not result in a significant impact on surface water or groundwater as a result of the development. Based on the above the proposals are in full compliance with Policy EN17 of the Core Strategy.

6.10 Other Material Considerations

The main socio economic impacts arising from the Application relate to the effects on the economy and local employment patterns and the provision of local resource recovery.

These effects will be maintained over the operational life of the Facility as well as the enhancement of the local environment in the longer term. The overall socio economic character of the area will therefore be maintained and the proposals will contribute to the creation of a sustainable economy.

In light of the above, the proposals are considered to be in compliance with the objectives of sustainable development set out in National Planning Policy Framework

7. Conclusion

7.1.1 This Planning Statement is submitted in support of an application for a new Anaerobic Digestion (AD) facility and associated infrastructure on the New Smithfield Market site

7.1.2 The application is submitted by Oaktech Environmental who is the licenced distributor within the UK of the IBR anaerobic Digestion technology as developed by Pure Energy (USA)

7.1.3 Oaktech Environmental have a proven track record of developing bespoke AD solutions to serve the needs of the Waste sector and, in line with discussions with Manchester City Council, they have developed an AD solution for New Smithfield Market that meets the need of the Market whilst also providing a local facility for the treatment organic waste and generation of Renewable Energy

7.1.4 A traffic Statement has been prepared from existing traffic data provided by the Market. This Statement concludes that:-

"The proposed development is therefore assessed to generate a similar / marginally increased level of traffic generation in comparison to the previous site uses. The predicted trip rates onto the local highway network as a result of the development proposal would be minimal and not perceptible to existing road users. It is therefore reasonable to conclude that the proposed development would not have a material impact on the surrounding highway network".

7.1.5 A noise survey has been carried out to determine existing background levels of noise emanating from the Market Site and its immediate surroundings. From this survey operational noise limits have been suggested for the design and operation of the Facility

7.1.6 The current open windrow composting operation on the site has not been surveyed or studied in any detail but by experience this existing operational facility will give rise to both odour and particulates. The proposed AD Facility will be operated in buildings and sealed tanks providing the means for odour and bio aerosol control.

7.1.7 The existing Landscape treatment within this part of the Market site is to be retained and additional landscaping provided along the eastern boundary of the Facility. The visual appearance of the Facility will be of modern industrial style sheds which are to be provided with curved roof profiles to soften their visual impact. The existing site is at a datum of approximately 3 to 4m below the neighbouring street level which will reduce further the visual appearance of the Facility when viewed from the nearest residential areas.

7.1.8 Other environmental impacts, as identified for consideration within the Screening Opinion, have been considered and any further potential environment impacts fully mitigated and controlled through planning conditions.

7.1.9 In conclusion, the development achieves the objective of delivering an enhancement to sustainable waste management at a local level and energy from a renewable source whilst also contributing to the improvement of the built environment within this part of Manchester. The facility will also provide employment opportunities for the local community and the potential for embedded electrical generation and Renewable heat serving the Market site or its immediate environs.