

APPENDIX 1 – REFERENCES

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Conservation of Habitats and Species Regulations 2010 Adopted 8th March 2010

APPENDIX 2 – THE ‘CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010’ AND LAND USE PLANS

Under Part 6, Chapter 8, of the above Regulations **An assessment of the implications for European sites and European offshore marine sites** is necessary where

102.—(1) Where a land use plan—

(a) is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and
(b) is not directly connected with or necessary to the management of the site,
the plan-making authority for that plan must, before the plan is given effect, make an appropriate assessment of the implications for the site in view of that site’s conservation objectives.

(2) The plan-making authority must for the purposes of the assessment consult the appropriate nature conservation body and have regard to any representations made by that body within such reasonable time as the authority specify.

(3) They must also, if they consider it appropriate, take the opinion of the general public, and if they do so, they must take such steps for that purpose as they consider appropriate.

(4) In the light of the conclusions of the assessment, and subject to regulation 103 (considerations of overriding public interest), the plan-making authority or, in the case of a regional strategy, the Secretary of State must give effect to the land use plan only after having ascertained that it will not adversely affect the integrity of the European site or the European offshore marine site (as the case may be).

(5) A plan-making authority must provide such information as the appropriate authority may reasonably require for the purposes of the discharge of the obligations of the appropriate authority under this Chapter.

(6) This regulation does not apply in relation to a site which is—

(a) a European site by reason of regulation 8(1)(c), or

(b) a European offshore marine site by reason of regulation 15(c) of the 2007 Regulations (site protected in accordance with Article 5(4) of the Habitats Directive).

Considerations of overriding public interest

103.—(1) If the plan-making authority are satisfied that, there being no alternative solutions, the land use plan must be given effect for imperative reasons of overriding public interest (which, subject to paragraph (3), may be of a social or economic nature), they may give effect to the land use plan notwithstanding a negative assessment of the implications for the European site or the European offshore marine site (as the case may be).

(2) In relation to a regional strategy, paragraph (1) applies to the Secretary of State as it applies to a plan-making authority in the case of any other land use.

(3) Where the site concerned hosts a priority natural habitat type or a priority species, the reasons referred to in paragraph (1) must be either—

(a) reasons relating to human health, public safety or beneficial consequences of primary importance to the environment; or

(b) any other reasons which the plan-making authority, having due regard to the opinion of the European Commission, consider to be imperative reasons of overriding public interest.

(4) Where a plan-making authority other than the Secretary of State or the Welsh Ministers desire to obtain the opinion of the European Commission as to whether reasons are to be considered imperative reasons of overriding public interest, they may submit a written request to the appropriate authority—

(a) identifying the matter on which an opinion is sought; and

(b) accompanied by any documents or information which may be required.

(5) The appropriate authority—

(a) may seek the opinion of the European Commission concerning the plan; and

(b) where such an opinion is received, must send it to the plan-making authority.

(6) Where a plan-making authority other than the Secretary of State or the Welsh Ministers propose to give effect to a land use plan under this regulation notwithstanding a negative assessment of the implications for the site concerned—

(a) they must notify the appropriate authority; and

(b) they must not give effect to the land use plan before the end of the period of 21 days beginning with the day notified by the appropriate authority as that on which their notification was received, unless the appropriate authority notify them that they may do so.

(7) Without prejudice to any other power, the appropriate authority may give directions to the plan-making authority in any such case prohibiting them from giving effect to the land use plan, either indefinitely or during such period as may be specified in the direction.

Co-ordination for land use plan prepared by more than one authority

104.—(1) The following provisions apply where two or more local planning authorities prepare a joint local development document under section 28(158) (joint local development documents) or a joint local development plan under section 72 (joint local development plans) of the 2004 Planning Act.

(2) Nothing in paragraph (1) of regulation 102 (assessment of implications for European sites and European offshore marine sites) requires a local planning

authority to assess any implications of a joint local development document or plan which would be more appropriately assessed under that provision by another local planning authority.

(3) The appropriate authority may issue guidance to local planning authorities for the purposes of regulation 102(1) as to the circumstances in which a local planning authority may or should adopt the reasoning or conclusions of another local planning authority as to whether a joint local planning document or plan—

(a) is likely to have a significant effect on a European site or a European offshore marine site; or

(b) will adversely affect the integrity of a European site or a European offshore marine site.

(4) The local planning authorities concerned must have regard to any such guidance.

(5) In determining whether a joint local development document or plan should be adopted under regulation 103 (considerations of overriding public interest), a local planning authority must seek and have regard to the views of the other local planning authorities concerned.

Compensatory measures

105. Where in accordance with regulation 103 (considerations of overriding public interest) a land use plan is given effect notwithstanding a negative assessment of the implications for a European site or a European offshore marine site, the appropriate authority must secure that any necessary compensatory measures are taken to ensure that the overall coherence of Natura 2000 is protected.

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APPENDIX 3 – KEY PRINCIPLES UNDERPINNING THE PROPOSED METHODOLOGY

Principle	Rationale
Build upon existing information	Existing information is to be used wherever possible. This includes information gathered as part of the SA of the emerging LDF and information held by Natural England, the Environment Agency, AGMA, and others (e.g. other local authorities, wildlife NGOs).
Consult with Natural England, the Environment Agency and other stakeholders	There is to be continued consultation with both Natural England and the Environment Agency for the duration of the HRA, including throughout the screening stage. Information held by them is to be utilised and any comments on the HRA process and findings are to be addressed.
Ensure a proportionate HRA/AA	The level of detail addressed in the HRA is to reflect the level of detail in the JWDPD (i.e. that the HRA is proportionate). With this in mind, the HRA is to focus on information and impacts considered appropriate to the local level.
Keep the process as simple as possible	The process is to be kept as simple as possible while ensuring an objective and rigorous HRA in compliance with the Habitats Directive, Habitat Regulations 2007 and emerging best practice. Decision making will be clear and justifiable, and will be based on a principle of 'common sense' wherever possible.
Work in effective partnership	As there is currently limited experience in undertaking plan-level HRA, it will be particularly important to work in partnership with key stakeholders including the Council itself, Natural England, the Environment Agency and others to ensure that the HRA takes account of different ideas and allow stakeholders to get involved. Also through such partnership, account is to be taken of emerging guidance, lessons learned from other projects, and the requirements of the stakeholders.
Conformity with key legislation and guidance	Account is to be taken of relevant legislation and emerging guidance, including The Habitats Directive (92/43/EEC), The Habitats Regulations 2007, Draft DCLG guidance, EC guidance on The Habitats Directive, The Birds Directive (79/409/EEC), and EN Habitat Regulation Guidance Notes.
Ensure a clear audit trail	The HRA process and findings are to be clearly documented in order to ensure an audit trail.

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APPENDIX 4: KEY PROCESSES AND POTENTIAL CAUSES OF IMPACT OF WASTE FACILITY CATEGORIES CONSIDERED IN SA STAGE 2 ISSUES AND OPTIONS REPORT

Waste Facility Category	Description	Assumptions	Potential Source of Impact	Recommended Buffer zone required ¹
Waste Management & Recycling – Open Facilities	<p>These facilities have the appearance of a low-end industrial use and involve facilities such as scrap yards, skip hire, construction and demolition yards. They are generally large sites with machinery and may be noisy.</p> <p>These sites may contain Household Waste Recovery Centres and Waste Transfer Stations (WTS) (receiving and bulking up waste before onward journey for treatment, recycling and disposal elsewhere) and some 'clean MRF' (Materials Recycling/Recovery Facility) where dry recyclables are taken for secondary sorting and processing prior to export to specialist industry processing facilities). However most MRF, and in particular 'dirty MRF' takes place within enclosed facilities (see enclosed (built) waste management</p>	<p>Any new open air waste management and recycling facilities would:</p> <ul style="list-style-type: none"> deal with inert waste only; would not deal with putrescible materials other than temporary storage/sorting of garden waste. This will not attract gulls, corvids or rats; will not deal with hazardous/controlled waste; include an outdoor waste transfer station; include a limited 'clean' MRF for sorting; generate significant traffic; and would not re-process recycled waste on site (no further industrial processing is 	<ul style="list-style-type: none"> surface water runoff contamination; dust; litter; noise and vibration; significant traffic generation; and physical encroachment. 	1km with additional consideration to hydraulic connections

¹ Based on Environment Agency (2004) *Habitats Directive Work Instruction (Appendix 6): Further Guidance applying the Habitat Regulations to Waste Management Facilities*

Waste Facility Category	Description	Assumptions	Potential Source of Impact	Recommended Buffer zone required ¹
	facilities below).	considered).		
Open Air Windrow Composting	Open air windrow composting is aerobic decomposition of shredded and mixed organic waste using open linear heaps known as 'windrows', which are approximately three meters high and four to six meters across the base. The process involves mechanical turning of waste until the desired temperature and residence times are achieved to enable effective degradation. This results in a bulk-reduced, stabilised residue known as compost. Open air windrow composting takes place outdoors	<p>These facilities would deal with aerobic decomposition.</p> <p>The presence of putrescible materials may attract gulls, corvids and rats as source of food and heat arising from decomposition. Birds and rats are most likely to be attracted to composting facilities where a population exists in the surrounding area (Gabrey, 1997, in EA, 2004). It is assumed that birds and rats are present in the surrounding Greater Manchester area.</p>	<ul style="list-style-type: none"> leachate/groundwater contamination; landfill gas; bioaerosols; surface water contamination; dust; gulls, corvids and rats; traffic generation; and physical encroachment. 	<p>1km</p> <p>5km where facility may to attract gulls/corvids and SPA, pSPA, Ramsar or European site vulnerable to disturbance or predation by these pests)</p>
Thermal Treatment <i>Conventional Thermal Treatment</i> <i>Advanced Thermal Treatment</i> <i>Pyrolysis</i> <i>Gasification</i>	<p>Large enclosed facilities that are highly regulated. Either Conventional Thermal Treatment (CTT) or Advanced Thermal Treatment (ATT) may take place, and may or may not also be used to generate heat/electricity.</p> <p>CTT comprises incineration of burning waste at high temperatures. This reduces volume by turning it to ashes and also generates heat/electricity.</p>	<p>For worst case it is assumed that CTT will take place as this is more polluting than ATT.</p> <p>Thermal treatment gas emissions are similar to those produced by landfill gas flare.</p>	<ul style="list-style-type: none"> gas emissions; surface water contamination; dust; traffic generation; and physical encroachment. 	<p>1km with additional consideration to hydraulic connections.</p>

Waste Facility Category	Description	Assumptions	Potential Source of Impact	Recommended Buffer zone required ¹
	ATT has reduced emissions and produces syngas which are an efficient fuel through pyrolysis (burning in absence of oxygen to produce syngas and solid residue) and gasification (partial oxidation).			
Waste Management & Recovery – Built (Enclosed) Facilities <i>Mechanical Biological Treatment</i> <i>Anaerobic Digestion</i> <i>In-vessel composting</i> <i>Mechanical Heat Treatment</i> <i>Material Recovery Facility</i>	These facilities include: Mechanical Biological Treatment (MBT) A process which treats residual waste after recycling has taken place. Reusable materials and contaminants are separated from the waste stream by a variety of mechanical processes and the remaining residue is then treated biologically prior to landfilling or energy recovery, typically through AD or the IVC treatment process (see below). The process reduces the water content of the waste (feed stock) and increases its calorific value allowing its use as a solid recovered fuel (SRF) Anaerobic Digestion (AD) A process where biodegradable material is broken down in the absence of oxygen in an enclosed container. It produces a mixture of carbon dioxide, methane and solids/liquids known as digestate which can be used for fertiliser,	An indoor WTS may be included at these facilities Vehicles are received in the building and cleaned as they leave to avoid any contamination. New facilities would: <ul style="list-style-type: none"> deal with 'dirty' Material Recovery Facility (MRF); deal with both inert and putrescible waste; may deal with hazardous/controlled waste; would generate significant traffic; Would not attract vermin such as rodents or birds as waste would stored/processed 	<ul style="list-style-type: none"> traffic generation; noise, particularly during construction/loading bays; leachate/groundwater contamination (run off from loading bays/vehicles); surface water contamination (run off from loading bays/vehicles); bioaerosols/ organic compounds from biological treatment processes 	1km with additional consideration to hydraulic connections

Waste Facility Category	Description	Assumptions	Potential Source of Impact	Recommended Buffer zone required ¹
	<p>compost or SRF. The methane gas released by the process is normally burnt to generate heat and power.</p> <p>In-vessel composting (IVC) The composting of biodegradable waste in an enclosed environment, ranging from enclosed halls to tunnels, reactors, vessels and containers. In the process the water content of the waste (feed stock) is reduced. This process can be controlled to regulate moisture and temperature to increase the rate at which the composting process occurs.</p> <p>Mechanical Heat Treatment A process which uses a combination of heat, air and moisture to clean and sanitise mixed recyclables to produce easily segregated recyclate and a residual organic material that can be used as a solid recovered fuel in other processes. (Also known as the autoclave process)</p> <p>Material Recovery Facility (MRF) A site where recyclable waste is mechanically or manually separated, baled and stored prior to reprocessing.</p>	indoors.		

Waste Facility Category	Description	Assumptions	Potential Source of Impact	Recommended Buffer zone required ¹
	Where these facilities accept organic (biodegradable) waste they are referred to as 'dirty MRFs' and will have to operate 24hrs a day 7 days a week to avoid the rotting of stockpiled material.			
Residual waste Disposal (Landfill / Landraise)	Landfill is the controlled deposit of waste to land. Often mineral workings and extraction sites are used as landfills, providing a means to restore the land. However where such 'holes in the ground' are not available, it is possible to deposit waste onto the ground surface and build up a waste disposal site i.e. landraising.	Any new facilities would be <ul style="list-style-type: none"> • open air; • deal with both inert and 'putrescible' (liable to undergo decomposition) waste; and • may contain hazardous or controlled waste. 	<ul style="list-style-type: none"> • landfill gas; • landfill gas flare emissions; • leachate; • surface water contamination; • dust; • litter; • noise and vibration; • gulls, corvids and rats; • traffic generation; and • physical encroachment. 	2km or 5km where facility may to attract gulls/corvids and SPA, pSPA, Ramsar or European site vulnerable to disturbance or predation by these pests Additional consideration to hydraulic connections

APPENDIX 5: AIR AS A PATHWAYS THROUGH WHICH THE GM JWDPD COULD POTENTIALLY LEAD TO SIGNIFICANT EFFECTS UPON THE EUROPEAN SITES

Important Anthropogenic Air Pollutants

1. Oxides of Nitrogen (NO_x)

These are formed during high temperature combustion processes from the oxidation of nitrogen in the air. An increase in the deposition of nitrogen from the atmosphere to soils is generally regarded to lead to an increase in soil fertility, which can have a serious deleterious effect on the quality of semi-natural, nitrogen-limited terrestrial habitats. High NO_x levels can also have direct effects on plants.

The main sources of NO_x in the UK are (Dore *et al.* 2003):

- road and other transport (approximately 47%, rising in urban areas);
- public power generation using fossil fuels (22%);
- combustion in industrial processes (14%); and
- domestic and commercial sources (4%), e.g. commercial boilers in schools, hospitals etc.

Traffic generated by large waste facilities therefore has the potential to contribute NO_x levels. Oxides of Nitrogen are also emitted from landfill gas flare/energy recovery facility emissions.

NO_x is the pollutant of most concern for sensitive vegetation near roads. The First EU Daughter Directive set a Limit Value for NO_x for the protection of vegetation (an annual mean of 30 µg/m³) to be met by 2001. This value was based on the work of the UNECE and WHO, and has been incorporated into the UK Air Quality Limit Value Regulations 2001. The policy of the UK statutory nature conservation agencies is to apply the 30 µg/m³ criterion in internationally designated conservation sites and SSSIs on a precautionary basis (DMRB, 2007).

Critical loads for the deposition of nitrogen, which represent the exposure below which there should be no significant harmful effects on sensitive elements of the ecosystem (according to current knowledge), have been established for certain habitats dependent on low nitrogen levels. Critical loads are expressed in deposition units of kg N ha⁻¹ year⁻¹.

2. Sulphur dioxide (SO₂)

This is an acidic gas that combines with water vapour in the atmosphere to produce acid rain. Both wet and dry depositions have been implicated in the damage and destruction of vegetation and in the degradation of soils and watercourses.

The main sources of SO₂ are (Dore *et al.* 2003):

- public power generation using fossil fuels (69%);
- combustion in industrial processes (13%);
- domestic and commercial sources (4%);
- non-road transport sources (3%); and
- road transport (<1%).

Sulphur oxides are emitted by landfill gas flare/ENERGY RECOVERY FACILITY emissions as well as traffic generated by large waste facilities. Major SO₂ problems now only tend to occur in cities in which coal is still widely used for domestic heating, in heavy industry and in power stations.

3. Dust (e.g. PM₁₀)

Dust can be associated with waste managing/processing activities where waste materials such as soil or demolition wastes are screened or graded, or where combustion takes place.

If present in sufficient quantities dust can smother vegetation, preventing light penetration to the chloroplasts and blocking stomata thus interrupting photosynthesis, transpiration, growth rate and set seed etc. In prolonged cases, death can result

Little work has been done on relative sensitivity of different species, but lichens and bryophytes are thought to be particularly sensitive (Farmer 1993). Dust size and chemical composition is important as smaller particles can enter or block stomata and thus interfere with gas exchange.

Dust with a toxic component may have effects over a wide area and at low levels. This could be a particular issue for scrap metal recovery sites, waste transfer stations, or special waste processing activities.

Dust can harm invertebrates indirectly by eliminating their habitat or food plants or making them effectively unavailable, and directly through being toxic or causing mechanical damage.

Building materials (e.g. cement, lime) may be alkali in nature. Dust from such sources may adversely affect acid habitats (e.g. heathland) (Environment Agency, 2004c).

4. Ammonia (NH₃)

This is probably the major source of nitrogen deposition to many wildlife sites, and is mainly agricultural or industrial in origin. The reaction products of ammonium has the potential to acidify soil (DMRB, 2007)

Ammonia emissions from road vehicles (from petrol-driven vehicles fitted with catalytic converters and heavy duty vehicles fitted with selective catalytic reduction), although small in a national context, can lead to significant additional deposition of nitrogen to vegetation in immediate vicinity of roads (typically within 10 m) (DMRB, 2007).

5. Low-level ozone (O3)

This is unlike the other pollutants mentioned, in that it is not emitted directly into the atmosphere, but is a secondary pollutant produced by a complex reaction between nitrogen dioxide (NO₂), hydrocarbons and sunlight. Ozone is toxic to plants but concentrations tend to be lower close to a road as it is scavenged by nitric oxide emitted by vehicles. As emissions of NO_x decrease in the future, ozone concentrations are expected to increase in urban areas and adjacent to roads and may pose an increased threat to vegetation in these areas. The reaction products of NO_x, SO₂ and NH₃ (nitrate, sulphate and ammonium) have the potential to acidify the soil unless mineral weathering, chemical or microbial processes within the soil or liming can neutralise the acid (DMRB, 2007).

Potential Sources of Air Pollution from Waste Sites

Landfill Gas

Landfill gas is produced by organic waste decomposing under anaerobic conditions in a landfill. The waste is covered and compressed mechanically and by the weight of the material that is deposited from above. This material prevents oxygen from accessing the waste and anaerobic microbes thrive. Landfill gas typically has methane concentrations of approximately 50%.

Migration of landfill gas outside the perimeter of landfill sites taking biodegradable waste can occur where sites have been inadequately engineered. In such circumstances the gas will exclude oxygen from the soil and lead to the exposure and possible death of plants and soil fauna. Such effects are unlikely beyond a 0.5km radius (Environment Agency, 2004c).

Landfill Gas Flare and CHP Emissions

A landfill gas flare (or utilisation engine) will produce an emission of exhaust gases such as SO_x, NO_x, unburnt hydrocarbons, CO, HCl, etc. The volume of exhaust gases is likely to be small in comparison to other combustion facilities and at a distance of >1km from the European site may well be inconsequential. At closer distances than this, or where there is doubt (due to the scale of the activity, the background air quality or any constraints in dispersion caused by topography, etc) the tests within Appendix 7 (and IPPC Guidance note H1) should be applied (Environment Agency, 2004c).

Thermal Treatment Gas Emissions

A utilisation engine within a thermal treatment centre produces exhaust gasses similar to landfill gas flare including SO_x, NO_x, unburnt hydrocarbons, CO, HCl, etc. The volume of exhaust gases is likely to be small in comparison to other combustion facilities and at a distance of >1km from the European site may well be inconsequential. At closer distances than this, or where there is doubt (due to the scale of the activity, the background air quality or any constraints in dispersion caused by topography, etc) the tests within Appendix 7 (and IPPC Guidance note H1) should be applied (Environment Agency, 2004c).

Bioaerosols, Airborn Microbes and Fungus

A bioaerosol is a biological aerosol. These particles are very small and range in size from less than one micrometer to one hundred micrometers. Air often contains tiny organisms such as fungi, bacteria, mycotoxins and viruses. None of these organisms live in the air but may be attached to other small particles such as dried residues from water droplets, dust or soil. Groups of the small organisms clump up and enhance survival while airborne. Due to

evaporation of water, bacterial cells usually die when they become airborne but under high humidity conditions bioaerosol levels are increased. Fungal cells such as spores, moulds and yeast can be active at low humidity levels and high or low temperatures. Bioaerosols react to air currents and move quickly or slowly depending on the environment. Bioaerosols are impacted by gravity but due to their size air density and air currents play a large role in their movement.

Bioaerosols can be generated through open air windrow composting, and mechanical biological treatment within enclosed (built) waste management and recycling centres. Airborne fungus and bacteria could cause damaging effects on plant and animal species. Controls of airborne microbes and fungus can include:

- damping down of materials to prevent dusts;
- shredding, turning, screening undertaken when wind speeds are not too high; and
- locating the site at a suitable distance from sensitive receptors.

The Environment Agency (2007) Chapter 4, The Environmental Permitting (England and Wales) Regulations 2007 states that in order to grant a permit for the composting in open windrows, no part of the site may be located within 1 kilometre of a European Designated Site.

Traffic Emissions

Air pollutants resulting from traffic can have an effect on vegetation. Concentrations of pollutants in air and deposition of particles can damage vegetation directly or affect plant health and productivity. Deposition of pollutants to the ground and vegetation can alter the characteristics of the soil, affecting the pH and nitrogen availability that can then affect plant health, productivity and species composition. Increased greenhouse gas emissions on a global scale can affect the global climate, such that the ability of existing species to tolerate local conditions can change (DMRB, 2007).

Small quantities of heavy metals released during combustion and from vehicle wear and tear, may accumulate in soils near the road. However, such emissions cannot be reliably quantified or the negative ecological effects determined (DMRB, 2007).

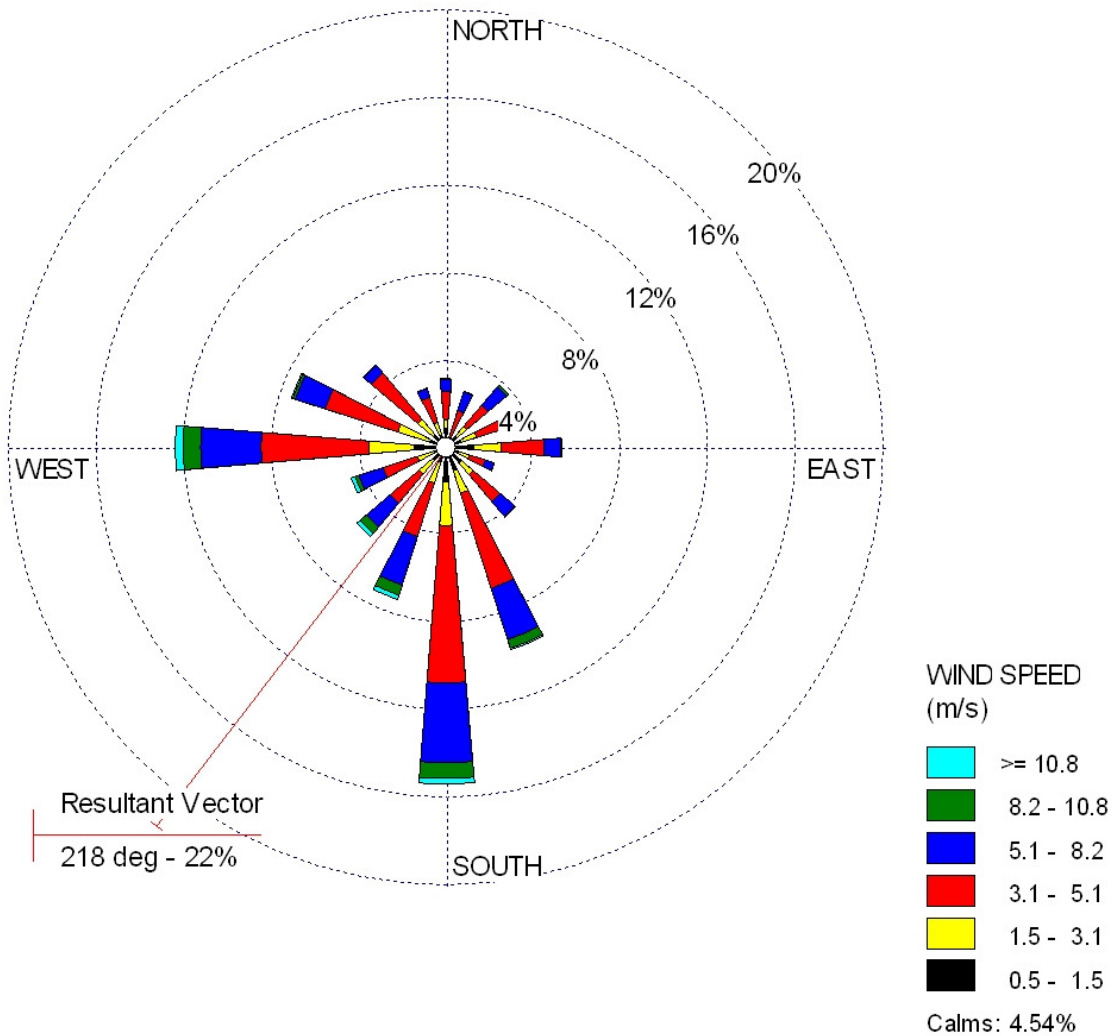
Dust

Dust can be associated with activities where waste materials such as soil or demolition wastes are screened or graded, or where combustion takes place. Waste facility categories that may generate dust include thermal treatment emissions, open air windrow composting, open waste management and recycling facilities.

Effects of dust will depend on the prevailing wind direction and the transport distance is related to particle size:

- Large particles (>30um) will mostly deposit within 100m of the source;
- Intermediate particles (10-30um) are likely to travel up to 200 - 500m; and
- Smaller particles (<10um) can travel up to 1km from the source. (DETR 2000c).

APPENDIX 6: WIND ROSE DIAGRAM FOR GREATER MANCHESTER, (2005)



APPENDIX 7 WATER FLOW AND QUALITY AS A PATHWAYS THROUGH WHICH THE JWDPD COULD POTENTIALLY LEAD TO SIGNIFICANT EFFECTS UPON EUROPEAN SITES

Through its Review of Consents process, the Environment Agency has identified diffuse pollution to be a major factor in causing unfavourable conservation status of European sites, including rivers, wetlands and estuaries/maritime sites. The quality of the water that feeds European sites is an important determinant of the nature of their habitats and the species they support. Poor water quality can have a range of environmental impacts. Sources of environmental impacts are described below.

Toxic Chemicals

At high levels, toxic chemicals and metals can result in immediate death of aquatic life, and can have detrimental effects even at lower levels, including increased vulnerability to disease and changes in wildlife behaviour.

Nutrients and Organic Matter

Eutrophication, the enrichment of plant nutrients in water, increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration. The decomposition of organic wastes which often accompanies eutrophication deoxygenates water further, augmenting the oxygen depleting effects of eutrophication. In the marine environment, nitrogen is the limiting plant nutrient and so eutrophication is associated with discharges containing available nitrogen.

Pesticides

Some pesticides, industrial chemicals, and components of sewage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life. Some male fish in UK rivers, for example, have demonstrated the physiological symptoms expected of oestrogen-mimicking chemicals - symptoms which have been linked to exposure to female hormones (synthetic and natural) in sewage effluent.

Urbanisation

Water quality may be indirectly altered as a result of urbanisation, for instance through:

- trans-basin water transfers introducing water of different chemical characteristics;
- pollution through water runoff from hard surfaces carrying oils, heavy metals and/or de-icing compounds;
- waste-water treatment effluent introducing water of different chemical characteristics;
- pollution from waste-water treatment effluent carrying increased pollutant loads;
- waste-water effluent carrying increased nutrient load, increasing the risk of eutrophication; and

- diffuse pollution resulting from land management and development.

Sources of Surface/Groundwater Pollution from Waste Sites

The sources of surface/groundwater pollution from waste sites comprise:

Leachate

Leachate can escape from waste sites by leakage through a barrier / containment system, break out through a cap, or overtopping containment. If it enters surface or groundwater it can pollute those waters and be transported down gradient. It can cause toxic effects and nutrient enrichment (Environment Agency, 2004c).

Leachate is normally associated with landfill sites, but can also be generated from open air windrow composting.

Surface Water Run off

Surface water may become contaminated by contact with waste and leachate, construction materials, or chemicals used on site (fuels, pesticides, etc). The resulting water may be toxic, nutrient rich, or may carry a load of suspended solids that could lead to siltation. The physical passage of water may lead to scouring and erosion. While these effects can be dispersed throughout the downstream water catchment, they will be most visibly manifested within tens of metres to a few hundred metres of the site (Environment Agency, 2004c).

A risk of water contamination exists through runoff from waste vehicles and loading bays/transfer areas in all five waste facility categories. Surface water management systems should be installed at all waste sites, with the aim of segregating 'clean, uncontaminated water' from potentially contaminated water. The contaminated water should be subject to appropriate treatment (on site or via sewer), prior to release to the environment. The manner of all discharges may need to be controlled to prevent erosion or siltation (Environment Agency, 2004c).

APPENDIX 8: OTHER PATHWAYS THROUGH WHICH THE JWDPD COULD POTENTIALLY LEAD TO SIGNIFICANT EFFECTS UPON THE EUROPEAN SITES

The following potential impacts may arise from waste facilities and could result in adverse effects on the integrity of a European Sites.

Physical Disturbance

This will be an issue where the waste activity directly impinges on a European Site. To cover for this eventuality, waste sites located adjacent to European Sites are considered to have the potential for physical disturbance.

Damage may occur through access to monitoring points or in litter collection. Physical damage may also be associated by rare accidents such as explosions of landfill gas, and for emergency access etc (Environment Agency, 2004c).

At present, designated rivers and canals (e.g. Rochdale Canal SAC) are not being considered for the transportation of waste to potential new waste sites. However should designated rivers and canals be used for the transportation of waste to waste sites, there is likely to be physical damage to qualifying features within the site due to increase in boat movements, and/or risk of accidental pollution.

Gulls, Corvids and Rats

Vermin is usually associated with landfill sites. However other types of waste management facility which deal with domestic/biodegradable or putrescible waste also have the potential to attract vermin.

Gulls, corvids and rats are attracted to sites which provide a source of food, heat, standing water and disturbed soils. Some Waste Transfer Stations, composting facilities, civic amenity sites and other similar activities are less likely to attract birds and rodents, but may do so where a population already exists in the surrounding area (Gabrey 1997).

Gulls, particularly larger species will predate the eggs and young of nesting birds. Dense colonies of breeding birds are likely to be particularly attractive to predators. The disturbance effect of gulls roosting or loafing in the vicinity of a landfill site may also deter other birds from nesting. The risk of predation will depend on the species involved. Terns are particularly sensitive. The evidence for breeding waders is less clear. If a proposed site is within a few kilometres of a breeding site of a qualifying SPA species, an appropriate assessment is likely to be necessary (Environment Agency 2004c).

Rodents may also eat the eggs of ground nesting birds, but these impacts are only likely to occur over a short distance.

Litter

Litter can be expected to arise at all sites, except those handling solely inert wastes or specific industrial wastes. The amount of litter will depend on the handling of waste (compaction, degree of enclosure) and the prevailing wind direction and strength.

An exceptionally large volume of litter would have to escape to give rise to smothering effects. This would not be acceptable purely on amenity grounds. More significantly perhaps, litter may escape to habitats where the physical access to collect litter could cause disturbance and habitat loss. In such circumstances total containment of litter may be required (Environment Agency, 2004c).

Noise and Visual

Disturbance from noise or visual intrusion is likely to be most relevant if the location of the waste activity or access routes are within or immediately adjacent to an SPA or certain SACs (e.g. those designated for bat species), though impacts have been reported up to 1km away due to more intense sources such as busy highways (Reijnen et al 1997).

Disturbance from construction or operational activities may cause sensitive birds and mammals to deviate from their normal, preferred behaviour. It is difficult to make generalisations about the likely effects of disturbance because a wide range of factors are involved and different species react differently. For this reason, the capacity of the relevant habitats to support the qualifying species (that are affected by disturbance) should be assessed, rather than the effect on individual species numbers.

The information on the effects of noise on wildlife is very limited and in the case of birds most of the studies relate to the effects of road traffic noise. It is likely that the effects will depend on the type and timing of disturbance and the proximity of the sources to the sensitive populations. It is thought that some birds adjust to long-term continuous noise levels or movement and those unpredictable or erratic noise events are more likely to cause disturbance.

Other factors that could influence responses to noise could be:

- the proximity of alternative roosting / resting / feeding areas;
- the time of year (vulnerability may increase during particular periods such as the breeding season, or the autumn/winter migration);
- during hard weather conditions when birds require more food than normal to balance energy budgets.

There is little doubt that environmental noise levels can have an effect on wildlife and that the effects are almost certainly dependent upon the type of noise and species exposed. One way to establish the effect of a particular activity is to compare wildlife populations etc. on parts of the European site affected by noise with other parts of the site. However, great care must be taken to eliminate other potential influences such as availability of food, cover, visual or other human impacts.

APPENDIX 9 – OTHER RELEVANT PLANS AND POLICIES, WITH SOME POTENTIAL IMPACTS AND POLICIES SET OUT TO MITIGATE FOR THEM

Note – this list is not exhaustive, but serves to represent those relevant policies and plans at the local and regional levels, some of which are under review.

Policies are pre-fixed with an ‘I’ to identify policies that may have a combined Impact on a European Site, or an ‘M’ to identify policies that act as Mitigation for impacts on a European Site. Mitigation policies are in green text to aid identification.

It should be noted that whilst the RSS has been abandoned by the Coalition government (elected May 2010), the RSS was in force at the time the screening decision was made

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p>The North West Plan: Regional Spatial Strategy (RSS)</p> <p><u>L4 - Regional housing provision:</u> 416,000 new dwellings 2003-2021:</p> <ul style="list-style-type: none"> • Manchester – 63,000 total (3,500 annual average) • Salford – 28,800 (1,600) • Wigan – 17,600 (978) • Tameside – 13,500 (750) • Bury – 9,000 (500) • Bolton – 10,400 (578) • Stockport – 8,100 (450) • Trafford – 10,400 (578) • Oldham – 5200 (289) • Rochdale – 7,200 (400) <p><u>EM3 - Green infrastructure:</u> Plans, strategies, proposals and schemes should aim to deliver wider spatial outcomes that incorporate environmental and socio-economic benefits by:</p> <ul style="list-style-type: none"> • conserving and managing existing green infrastructure; • creating new green infrastructure; 	<p>I Increased population and increased recreational pressure on relevant sites</p> <p>M Provision of green infrastructure can help offset recreational pressure on European sites</p> <p>I Increased population, increased traffic on the stretch of the M62 next to the Manchester Mosses SAC</p> <p>M Public transport provision, combined with highway demand management measures and a shift of freight from road to other modes can help alleviate traffic on the M62, alongside other non-car modes (e.g. cycling)</p> <p>I Increased sewerage</p> <p>M Phasing development to reflect water and sewerage capacity can offset adverse effects to water quality</p>

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<ul style="list-style-type: none"> enhancing its functionality, quality, connectivity and accessibility. <p><u>RT1 – Integrated Transport Networks:</u> Transport problems and issues in the region should be examined on a multi-modal basis to develop sustainable, integrated and accessible solutions for all users. The management of routes in the Regional Highway Network should be closely co-ordinated with relevant Route Utilisation Strategies on the rail network where available.</p> <p>Plans and strategies should seek to make best use of existing infrastructure and to capitalise on developments in intelligent transport systems and information and communications technology. They should focus on improving journey time reliability in the key transport corridors and enhancing the accessibility of the region’s gateways and interchanges, particularly the international ones.</p> <p><u>RT4 - Management of the highway network:</u> The Highways Agency and Local Highway authorities should prepare Route Management Plans in accordance with Regional Planning Body guidance for all routes in the Regional Highway Network. Plans should make best use of existing infrastructure and proposals for major highway improvements should only be included following an examination of all practical alternative solutions to a particular problem.</p> <p><u>RT7 - Freight Transport:</u> Plans and strategies should take account of the aims and objectives of the Regional Freight Strategy. Local authorities should develop sub-regional freight strategies, including the establishment of Freight Quality Partnerships to promote constructive solutions to local distribution problems and issues.</p> <p><u>W2 - Locations for regionally significant economic development:</u></p> <ul style="list-style-type: none"> Regionally significant economic development will be located close to sustainable transport nodes within the urban area of Manchester; Sites for regionally significant knowledge-based services may also be clustered close to universities, major hospitals or other research establishments. Sites for regionally significant knowledge-based manufacturing should be well connected to these facilities by transport and ICT links. Sites for regionally significant logistics and high-volume manufacturing should be 	<p>I New employment land and/or inter-modal freight terminal at Newton-le-Willows (i.e. Parkside) increasing overall risk of accidental spills into watercourses (direct or through drainage)</p> <p>I Increase/intensification of development modifying watercourse and/or increasing surface water runoff</p> <p>M Sustainable drainage measures can offset adverse effects to water quality and surface flow</p>

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p>well connected to the primary freight transport networks;</p> <ul style="list-style-type: none"> • Inter-modal freight terminals facilitating the transfer of freight from road to rail and/or water (Policy RT8) – with rail access and potential access to the Manchester Ship Canal. <p><u>W3 - Supply of sub-regional and local employment land:</u> 5,472 ha required between 2005-2021 in the NW; 1,904 ha in Greater Manchester</p> <p><u>EM5 - Integrated Water Management:</u> In achieving integrated water management and delivery of the EU Water Framework Directive, plans and strategies should have regard to River Basin Management Plans, Water Company Asset Management Plans, Catchment Flood Management Plans, and the Regional Flood Risk Appraisal. Local planning authorities and developers should protect the quantity and quality of surface, ground and coastal waters, and manage flood risk</p> <p><u>EM7 - Minerals Extraction:</u> Plans and strategies should make provision for a steady and adequate supply of a range of minerals to meet the region's apportionments of land-won aggregates and requirements of national planning guidance.</p>	
<p>Greater Manchester Municipal Waste Management Strategy – Review 2006/7 (adopted April 2007)</p>	
<p><u>Proposed Waste Management Targets/Objectives:</u></p> <ul style="list-style-type: none"> • Reduction of 50% in non-household municipal waste • Recycling and composting 20% household waste in 2005/6, 33% in 2010, >50% in 2020 • Implementation of residual waste treatment processes with use of refuse derived fuels; retain and optimise the use of Bolton Thermal Recovery Facility (TRF) throughout the life of the strategy • Landfill of biologically active residues not to exceed quantities permitted under Landfill Allowance Trading Scheme (LATS) 	<p>Main environmental impacts of municipal waste management include:</p> <ul style="list-style-type: none"> • Climate change • Air pollution • Water pollution • Land contamination • Biodiversity and ecological degradation • Public health • Public amenity • Resource efficiency • Transport
<p>Wigan Revised Municipal Solid Waste Management Strategy</p>	

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p>Proposed Waste Management Targets/Objectives to 2030:</p> <ul style="list-style-type: none"> • Stabilise municipal waste growth to 1% by 2010 and reduce to 0% by 2020 • Achieve recycling and composting standards of 45% by 2015 and 50% by 2020 • Recover 67% of waste by 2015 and 75% by 2020 • Reduce biodegradable municipal waste landfilled to levels consistent with those set for Wigan Council by LATS • Serve all households with a recycling collection of at least two materials by 2010 to meet the requirements of the Household Waste Recycling Act 2003 • Increase recycling and composting at HWRCs to 70% by 2013 • Reduce residual household waste per household to 887kg per household by 2008/9, 791kg by 2209/10 and 776kg by 2010/2011 	<p>Main environmental impacts of municipal waste management include:</p> <ul style="list-style-type: none"> • Climate change • Air pollution • Water pollution • Land contamination • Biodiversity and ecological degradation • Public health • Public amenity • Resource efficiency • Transport
<p>Greater Manchester Local Transport Plan (LTP2)</p>	
<p><u>LTP 6 a, b - Peak traffic flow to Regional centre/other key centres:</u> No increase in peak period vehicle trips into the Regional centre Limit peak period vehicle trips into other key centres to no more than a 1% increase by 2010/11</p> <p><u>LTP8 - Air quality:</u> A review and assessment of air quality due in 2006/07 - will involve improvements to the air quality forecasting model, to improve the way in which the relationship of NOx emissions and NO2 concentrations is modeled.</p> <p>39% reduction in NOx emissions from traffic on local roads from 2004-2011</p> <p><u>LTP9 - Climate change:</u> Limit increase in CO2 emissions to 4.5%</p>	<p>M Noise - Positive effect of cycling & walking dependent on modal shift; N/a; Slightly beneficial</p> <p>M Local air quality - Minor positive impact of bus measures, positive effect of cycling & walking dependent on modal shift, significant positive effect of travel plans, local positive effects of traffic calming; LTP8 - 39% reduction in NOx emissions from traffic on local roads from 2004-2011; Beneficial</p> <p>M Greenhouse gases - Positive effect of cycling & walking dependent on modal shift; LTP9 -limit increase to +4.5% between 2004-2011; Slightly beneficial</p>
<p>Oldham Unitary Development Plan (adopted 14 July 2006) and any subsequent Core Strategy and Local Development Framework (LDF)</p>	

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p><u>NR4 –minerals:</u> The principal minerals of economic value within the Borough are sand, gravel, sandstone and gritstone. Proposals related to these minerals should be appropriately located in relation to residential and other sensitive areas of the borough. The council will not permit any applications which may cause harm to appearance or character of designated wildlife sites, species or habitats protected by law</p> <p><u>B1 - Employment land allocation:</u> Allocation of 75.9ha of land for development of business in industry in the Borough.</p> <p><u>H1 - Providing for general housing need:</u> Improve the condition of the existing housing stock and allocate sufficient land to enable 3,595 dwellings to be constructed from 1st July 1994 - 30th June 2001.</p> <p><u>TN2 - The transport network:</u> Operate and monitor a hierarchy of traffic routes, in particular maintain, improve and develop the strategic route network to safely and efficiently accommodate any increased traffic flows over the plan period. Proposals which would prejudice the ability of the strategic route network to accommodate high traffic flows will not normally be permitted.</p> <p><u>OE1 Green Belt</u> assists in safeguarding countryside from encroachment. Essential open sport and recreation facilities (e.g. small stables, golf course, country park) may be permitted.</p> <p><u>NR1 Air Quality</u> The Council will require air quality assessments to be submitted alongside planning applications for the types of developments identified in the Air Quality Action Plan*. Where a development is likely to result in unacceptable levels of pollutants under the objectives set out in the National Air Quality Strategy, the Council will require mitigating measures, or secure changes to the proposal that will make it acceptable, before granting planning permission.</p> <p><u>B1 Business allocation</u> The Council allocates 75.93 Hectares of land in appropriate locations for development to meet the needs of the business and industry in the Borough.</p>	<p>I Increased population and increased recreational pressure on South Pennine Moors/Peak District Moors)</p> <p>I Increased population, increased traffic on the stretch of the M62 through South Pennine Moors/Peak District Moors.</p> <p>M Public transport provision, combined with highway demand management measures and a shift of freight from road to other modes can help alleviate traffic on the M62, alongside other non-car modes (e.g. cycling)</p> <p>I Increase in industry within Borough, with prevailing winds may result in cumulative air quality impact on integrity of South Pennine Moors/Peak District Moors.</p> <p>M Air quality assessment will be required for types of development identified in Air Quality Action Plan. This may mitigate air quality impacts</p> <p>M Protection of green belt serving as an ecological 'buffer zone' around the South Pennine Moors/Peak District Moors.</p>

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p>Rochdale MBC Unitary Development Plan (adopted June 2006) and any subsequent Core Strategy and Local Development Framework (LDF)</p> <p><u>LT/3 Development for Tourism and Leisure</u> Proposals for new or extended tourist attractions or facilities for visitors: The Council's Tourism Strategy will focus on a wide range of activity and leisure interests and emerging trends including boating and canal activities</p> <p><u>LT/3 Development of tourism and leisure:</u> Tourism is promoted in the Pennine Edge</p> <p><u>LT/7 Rochdale Canal</u> Development proposals will not be permitted that would adversely affect: The nature conservation value of the Canal (as a SSSI and SAC) consistent with policies NE/2 and NE/4; or</p> <p><u>G/H/1 Housing:</u> Provision of land for a net increase of 240 dwellings per annum in the period 2002 to 2016.</p> <p><u>G/A1/A2 Accessibility</u> New developments and new transport infrastructure shall be located designed and integrated with its surroundings in such a way as to reduce the growth in length and number of motorized journeys, facilitate access by walking, cycling and public transport: Development proposals will be permitted where the design and layout of all schemes, or proposals for highway works, reflect the following broad hierarchy of accessibility i. Pedestrians and disabled people; ii. Cyclists; iii. Public transport; iv. Taxis, private hire vehicles and commercial traffic for local access; v. General traffic (off-peak); vi. General traffic (peak).</p> <p><u>H/6 Provision of recreational open space in new housing development:</u> New housing developments required to make adequate provision for recreational open space by applying a standard of 2.1ha per 1000 population</p> <p><u>G/R/1 Physical regeneration:</u></p>	<p>I – Encouragement of development on areas adjoining canal (including rural areas) resulting in increase pollution of canal. I- Development for Tourism and Leisure including boating and canal activities resulting in further disturbance of canal I-Development of Tourism on Pennine Edge</p> <p>M- Offset by development proposals will not be permitted that would adversely affect the SAC designation of the Canal M, all projects or development proposals which might impact on the scientific integrity of international sites site will be subject to the closest examination under Policy NE/2.</p> <p>I- Increase in population/regeneration/industry of Rochdale resulting in increase traffic and air pollution, enhanced by prevailing south westerly winds M- Offset by policy to enhance sustainable transport with accessibility hierarchy placing general traffic at bottom of hierarchy</p>

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p>Regeneration G/R/1 Policy will encourage physical regeneration, renewal and redevelopment on areas including adjoining Rochdale Canal (Including Rural Sites and Areas) Where consistent with other policies and Proposals of the Plan</p> <p><u>GC/EC/1: Employment and Economy</u> Provision of adequate supply of land and premise for employment generating uses, including protection of existing industrial land, identification of land available for industrial/commercial development</p>	
<p>Trafford Unitary Development Plan (adopted 19th June 2006) and any subsequent Core Strategy and Local Development Framework (LDF)</p>	
<p>H1: Land Release for Development (as in RSS13, 7,740 net new dwellings 2003-2021)</p> <p>H2: Location and Phasing of New Housing Development</p> <p>T1: Sustainable Integrated Transport Network</p> <p>ENV8 – River Valleys and Major Watercourses The Council will develop the recreation, wildlife and leisure potential of the valleys and major watercourses in Trafford commensurate with landscape and wildlife interests, and, where appropriate, will seek to re-establish a countryside character in the Mersey and Bollin valleys.</p> <p>ENV13– River Valley Floodplains The Council will only permit land-filling, land-raising or other development in flood plains, as shown on the Proposals Map, in wholly exceptional circumstances and where It will not increase the risk of flooding, by reducing flood storage capacity, increasing flows within the floodplain or via the additional discharge of surface water.</p> <p>ENV10 The Council will seek to consolidate and strengthen the effectiveness of the wildlife corridors including the Mersey Valley and Manchester Ship Canal,</p>	<p>I Increased population leading to increased traffic on the stretch of the M62 next to the Manchester Mosses SAC</p> <p>M Prioritisation of non-car transport modes can help alleviate traffic on the M62</p> <p>I Recreation pressure on Mersey Valley may enhance water quality pressures on Mersey Estuary SPA/SAC downstream.</p> <p>I Increase in industry may result in surface water runoff and cumulative pollution of River Mersey</p> <p>M Strict pollution prevention controls will be in place to ensure water quality of the Mersey is not compromised by industrial development.</p> <p>M Enhancement of Manchester Ship Canal/Mersey Valley wildlife corridors linking to Mersey Estuary will result in beneficial impacts to Mersey Estuary SPA/SAC</p>

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p>Tameside Unitary Development Plan (adopted 17th November 2004) and any subsequent Core Strategy and Local Development Framework (LDF)</p> <p><u>H1 - Housing land provision:</u> Land will be made available for an average of 370 new dwellings per year, net of clearance, to be provided in the Borough from April 2002 to March 2011, or to the date when a reviewed plan is adopted if earlier.</p> <p>Land will be made available, in addition, to allow for the replacement of dwellings lost through clearance, predicted to average 170 dwellings per year from April 2002.</p> <p>Priority given to the construction of new dwellings on previously developed sites and the reuse of empty and underused buildings for residential purposes, and will aim to provide at least 80% of new dwellings on such sites between April 2002 and the end of the plan period.</p> <p>Development of greenfield sites will not be permitted unless an adequate five year supply is no longer available through outstanding commitments and remaining allocated sites, inclusive of an appropriate allowance for brownfield windfalls.</p> <p><u>MW5 - Movement of minerals and waste:</u> Permit the development of rail or water linked minerals or waste management facilities where these have good access to the network of major roads, subject to compliance with policy MW9.</p> <p>Where appropriate, planning agreements will be sought to control the routing of vehicles to and from mineral workings, aggregates depots and waste management sites, and to secure highway improvements required as a result of such developments.</p> <p>MW2/MW9 Mineral Developments will only take place where there will be no unacceptable harm to the water environment, water resources, groundwater levels or groundwater flows, and no unacceptable impact on any site or area designated internationally, nationally or locally for protection of nature conservation interests, and no adverse impact on protected species</p>	<p>I Population increase/recreation policy may increase pressure on Peak District Moors.</p> <p>I Population increase/industry growth may increase traffic on A628 and baseline air pollution levels.</p>

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
Wigan Core Strategy Preferred Options (published June 2009)	
Various spatial strategies: <ul style="list-style-type: none"> • promoting locations for regionally significant economic development; • promoting new transport infrastructure; • designating areas for provision of housing. 	<p>I Increased population and increased recreational pressure on relevant sites M Provision of new and improved open space can help offset recreation pressure on European Sites</p> <p>I Increased population, increased traffic on the stretch of the M62 next to the Manchester Mosses SAC M Promoting better accessibility to non-car transport modes (e.g. walking, cycling and public transport) can help alleviate traffic on the M62;</p> <p>I Increase / intensification of development modifying watercourse and/or increasing surface runoff M CP12 Astley and Bedford Mosses SAC will be protected in accordance with the governing legislation; M Support functional networks for wildlife habitats and species including features of nature conservation importance and work with adjacent districts on cross-boundary issues and impacts; M Protect and enhance the borough's ponds, watercourses, waterbodies and wetlands</p> <p>M CP16: Ensure development does not result in unacceptable levels of pollution in watercourses or groundwater or which would result in the transfer of contaminated run off to foul or surface water sewers or that would compromise the integrity of the mosslands.</p>
Wigan Replacement Unitary Development Plan (adopted 2006) Saved Proposals	
R1E: Open Space in New Housing Developments R1B: New Housing Sites	<p>I Increased population and increased recreational pressure on relevant sites M Provision of open/play space and play equipment can help offset recreation pressure on European Sites</p>

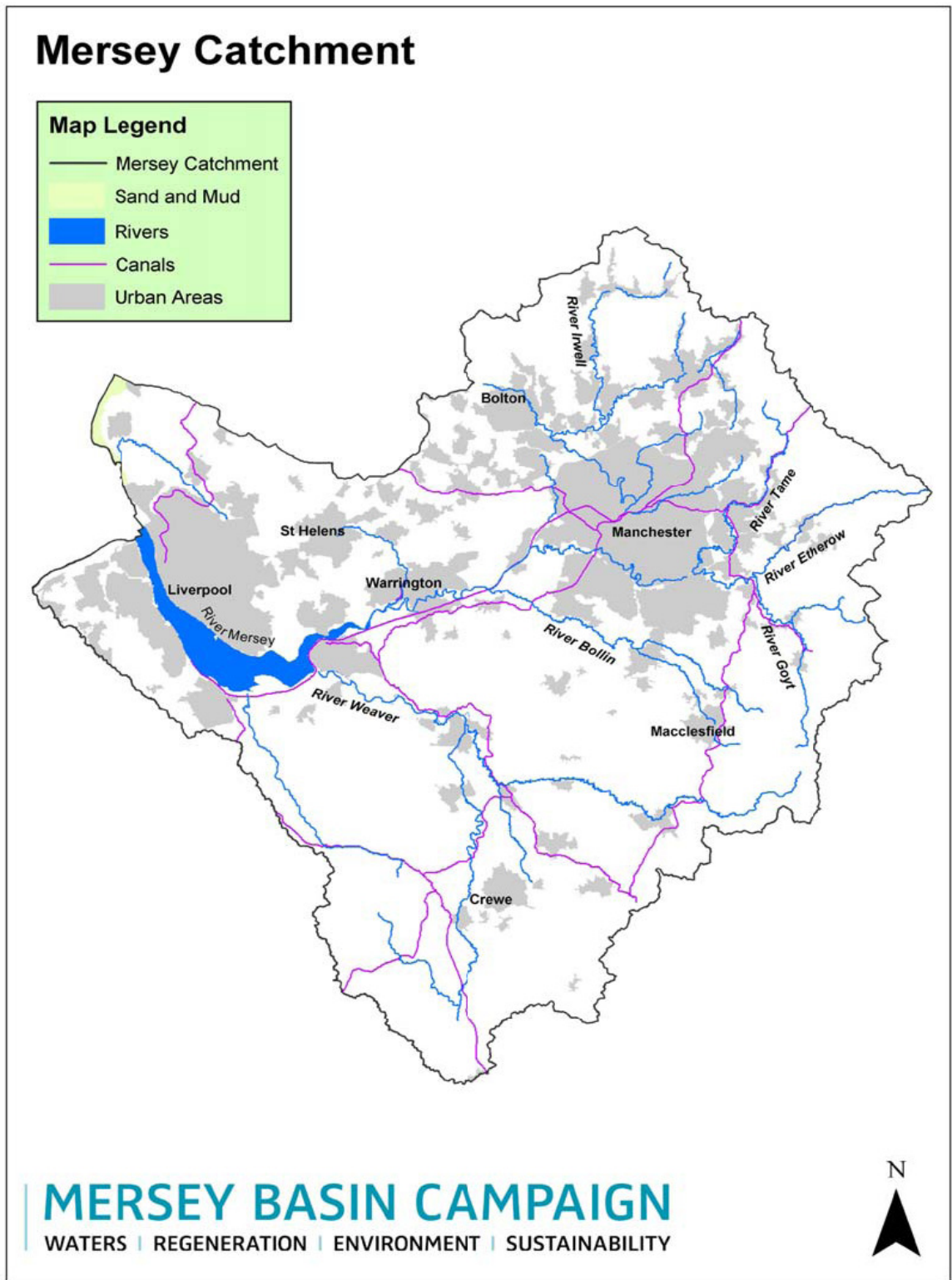
Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p>R1D: The Design of New Residential Development...</p> <p>EM1: Land and Buildings for Employment Uses (259ha to 2016)</p> <p>EV2C: Features of Major Importance for Nature Conservation and Wildlife Corridors</p> <p>EV1A: Land Reclamation and Renewal (Nos. 6 & 9)</p> <p>EV1B: Pollution</p> <p>HOU1: Housing Land (5,320 new dwellings to 2016)</p> <p>HOU4: Open Space Provision in New Housing Developments LUT2: Transport Priorities in Development Control HOU1: Housing Land (not permitted on greenfield sites)</p> <p>EMP1: Employment Development (310ha 1996 to 2016)</p> <p>REP5: Surface Water Run-off and Sustainable Drainage Systems</p> <p>EMP2: Omega South Reg. Investment Sites (130ha) EMP3: Provision of Land for Employment Development (90ha) DCS8: Chapelford Urban Village (92ha)</p> <p>REP6: Surface Water Quality</p> <p>G/M/1 An adequate supply of mineral reserves in appropriate locations will be maintained. Mineral exploration, working, mineral waste disposal or aggregate depots will be permitted only if</p> <p>(h) there will not be an unacceptable effect on ecological, interest within or adjacent to the</p>	<p>I Increased population, increased traffic on the stretch of the M62 next to the Manchester Mosses SAC</p> <p>M Promoting better accessibility to non-car transport modes (e.g. walking, cycling and public transport) can help alleviate traffic on the M62</p> <p>I Increase / intensification of development modifying watercourse and/or increasing surface runoff</p> <p>M Development will not be permitted if there are adverse effects to watercourse corridors</p> <p>I Increased sewerage</p> <p>I New employment land increasing overall risk of accidental spills into watercourses (direct or through drainage)</p> <p>I Accidental contamination of watercourses during renewal</p> <p>M Development will not be permitted if it would 'result in unacceptable levels of pollution in watercourses...'</p> <p>I Increased population leading to increased demand on water resources</p> <p>I Increase / intensification of development or redevelopment modifying watercourse and/or increasing surface water runoff</p> <p>M 'Planning permission will not be granted for housing development on greenfield sites'</p> <p>M Development will not be allowed where it has an adverse effect on river channel erosion or habitats, and SUDS used where appropriate</p>

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p>site</p> <p>(j) There will not be an unacceptable effect on land stability, drainage, water supply or ground water resources</p>	
<p>City of Salford Unitary Development Plan 2004-2016 (adopted 21st June 2006) and any subsequent Core Strategy and Local Development Framework (LDF)</p> <p>ST2: Housing Supply (6,360 new dwellings 2004-2016)</p> <p>ST5: Transport Networks</p> <p>DES2: Circulation and Movement</p> <p>EN1 Developing within green belt will generally be considered inappropriate</p> <p>W1 Waste management developments will be encouraged to utilise rail and water transport where possible, to minimise their impact on road congestion, air pollution and climate change.</p> <p>Policy EN 18 Protection of Water Resources Development will not be permitted where it would have an unacceptable impact on surface or ground water in terms of its quality, level or flow. The city council is a partner in the Mersey Basin Campaign, which is working to improve the quality of all rivers, canals, lakes and watercourses to a standard that will at least sustain fish life. When assessing development proposals, the city council will, in consultation with the Environment Agency, pay due consideration to the potential impact(s) on surface and groundwater resources. This includes leachate from contaminated sites and abandoned mine workings, particularly if disturbed.</p>	<p>I Increased population leading to increased traffic on the stretch of the M62 next to the Manchester Mosses SAC</p> <p>M Prioritisation of non-car transport modes can help alleviate traffic on the M62</p> <p>M Protection of green belt serving as an ecological 'buffer zone' around the Manchester Mosses SAC.</p> <p>M other (municipal) waste developments minimise traffic generation</p> <p>I Use of water (e.g. Manchester Ship Canal) for transportation of waste may increase risk of pollution incident of Mersey Estuary</p> <p>M Salford City Council will assess impact of all development proposals on water quality, level and flow of Mersey. This will ensure the integrity of the Mersey Estuary SAC/SPA is safeguarded</p>
<p>Catchment Flood Management Plans (Draft for Consultation September 2008)</p>	

Key relevant policies/strategies	Relevant potential impact (I) / mitigation (M)
<p>Draft Plans have been produced for:</p> <ul style="list-style-type: none"> • Irwell; • Upper Mersey; • Mersey Estuary; and, • Douglas. <p>The main aims of the Catchment Flood Management Plans are to:</p> <ul style="list-style-type: none"> • Develop policies and actions for long term management of flood risk within the catchment; • To take into account the impacts of:- <ul style="list-style-type: none"> - Future predicted climate change - Changes in land use and land management - Urban growth • Contribute to sustainable development; • Assess current and future flood risk from all sources except the sea; • Identify opportunities and constraints for reducing flood risk. 	<p>I Policies developed may conflict with nature conservation objectives of European sites.</p> <p>M Preparation of Strategic Flood Risk Assessments can apply the Sequential Test and Exception Test to land use allocations; and prepare policies for managing flood risk within Local Development Documents.</p>

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APPENDIX 10 THE MERSEY ESTUARY CATCHMENT



Source: Mersey Basin Campaign (2004)