Wigan Council

PLACES DIRECTORATE

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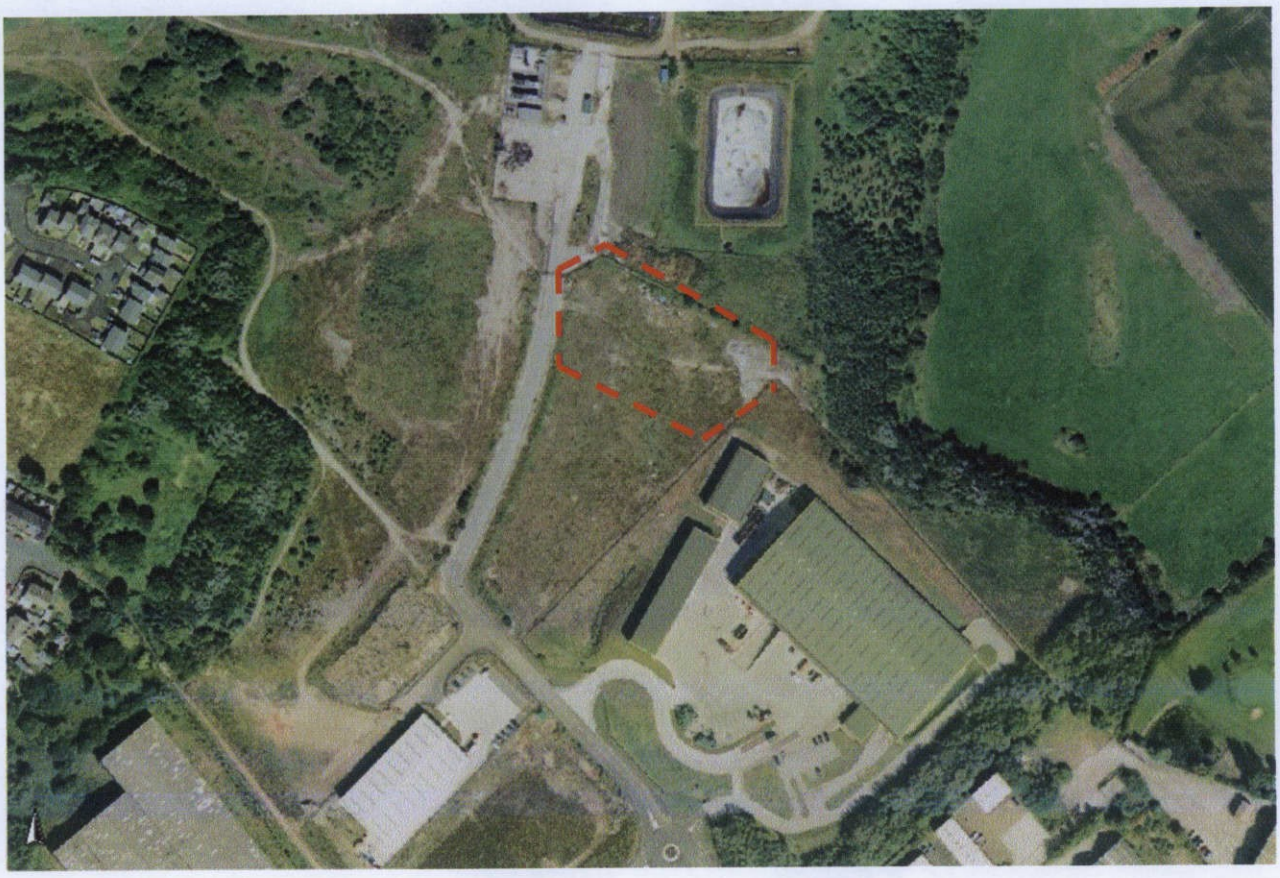
WASTE AND INFRASTRUCTURE DIVISIONS

NEW ORGANICS WASTE TRANSFER STATION

APPENDIX A – ECOLOGY SURVEY REPORT



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Wigan Council

Kirkless Waste Facilities, Wigan

Ecological Appraisal

7 October 2013

AMEC Environment & Infrastructure UK Limited

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Wigan Council

Kirkless Waste Facilities, Wigan

Ecological Appraisal

7 October 2013

AMEC Environment & Infrastructure UK Limited

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Executive Summary

AMEC Environment and Infrastructure UK Ltd (AMEC) was commissioned by Wigan Council to undertake an Ecological Appraisal of an existing and proposed waste facility at Kirkless, Wigan. The Ecological Appraisal was informed by a desk study and a series of ecological surveys (Extended Phase 1 Habitat survey, reptile survey and great crested newt survey).

Wigan Council's proposals comprise two facilities: 1) continued operation of the existing 'Residual Waste Facility' at Kirkless, and 2) a new 'Organic Waste Facility' adjacent to the Residual Waste Facility. Both facilities will collectively form part of the waste management infrastructure for Wigan and the Ecological Appraisal is required by Wigan Council to inform its waste management procurement process.

There are ten designated wildlife sites within 2km; 9 are non-statutory designated Sites of Biological Interest; one is a statutory designated Local Nature Reserve. Part of Kirkless Lane SBI is situated within the northern boundary of the proposed new Organic Waste Facility location. It is recommended that development should not encroach any closer than 50m from the Kirkless Lane SBI boundary to:

- avoid direct landtake of the habitats within the SBI; and
- limit unintentional indirect off-site effects such as littering or trampling.

All other designated sites are at least 0.2km away and it is considered the potential detrimental indirect effect (if any) on such sites would be intangible and negligible by consideration of various factors including distance, the qualifying features of these designated sites, and the construction and operational practices of the existing/ proposed waste facilities.

Collectively the two waste facility locations contain a mosaic of habitats and are considered to represent a locally valuable 'ecological stepping stone' between the designated wildlife sites in the wider landscape and within an otherwise semi-urbanised landscape, provide opportunities for a range of animals. Therefore to ensure this function as a locally valuable ecological stepping stone is maintained, ensure animals continue to be supported, and to ensure no net loss of local biodiversity, a range of suggestions relating to the retention of existing habitats/ creation of new habitats (deciduous woodland, semi-improved grassland, scrub and hedges) are made in this report.

No great crested newt or reptiles were recorded during the presence/ absence surveys undertaken. Great crested newt, reptiles and a range of other protected species are considered probably absent for the reasons stated in the report. Accordingly specific environmental measures for protected/ notable species are limited to:

- ensuring exterior lighting operated by the waste facilities should not shine directly onto or in close proximity to (within 50m) of the edges of woodland to avoid disturbing foraging bats;

- clearing trees or scrub outside the breeding bird season (breeding season taken to be end of March to early August inclusive). Where this is not possible, a suitably experienced ecologist should be present to check for any nests prior to vegetation removal or any activities which may significantly disturb breeding birds. Where a nest is found to be present works should be prevented until the chicks have fledged and left the nest. This is because there is no mitigation licence available for development related activities affecting breeding birds;

- The rubble piles present should be cleared during the period April to mid-October inclusive when night-time minimum temperatures are no lower than 5 Celsius, and hand-searched immediately before clearance. Any resident conservation notable amphibians (e.g. common toad) and/or mammals (e.g. hedgehog) should be carefully moved by hand to suitable dense vegetation away from working areas.

Contents

1. Context

1.1 Terms of Reference

AMEC Environment and Infrastructure UK Ltd (AMEC) was commissioned by Wigan Council to undertake an Ecological Appraisal of an existing and proposed waste facility at Kirkless, Wigan. The Ecological Appraisal was informed by a desk study and a series of ecological surveys (Extended Phase 1 Habitat survey, reptile survey and great crested newt survey).

Wigan Council's proposals comprise two facilities: 1) continued operation of the existing 'Residual Waste Facility' at Kirkless, and 2) a new 'Organic Waste Facility' adjacent to the Residual Waste Facility. Both facilities will collectively form part of the waste management infrastructure for Wigan and the Ecological Appraisal is required by Wigan Council to inform its waste management procurement process.

1.2 Development Location and Proposals

1.2.1 Location

Both facilities are situated on the outskirts of Ince-in-Makerfield within the Metropolitan Borough of Wigan. Wigan is located approximately 3km to the east. A small town (Hindley) is located approximately 1.5 km to the south of the Residual Waste Facility. The site is centred on approximate NGR 361010, 405890. Access to the site is off Makerfield Road.

1.2.2 The Existing Residual Waste Facility

The Existing Residual Waste Facility is square in shape and is approximately 2.8 hectares (ha) in area and is currently operated as a waste transfer station/ Household Waste and Recycling Centre (HWRC). It is fenced by palisade security fence and is secure and surrounded by open grassland, industrial units and a golf course. To the north is the closed Kirkless Landfill Site. It is proposed that it will continue to operate as a waste transfer station/ HWRC and will receive residual waste from the Wigan Council's waste collection service for treatment and disposal.

No specific change in land-use or extent were known or proposed at the time of reporting, but nonetheless, Wigan Council require the baseline ecological conditions to be determined to inform any future proposals that may arise.

1.2.3 The Proposed New Organic Waste Facility

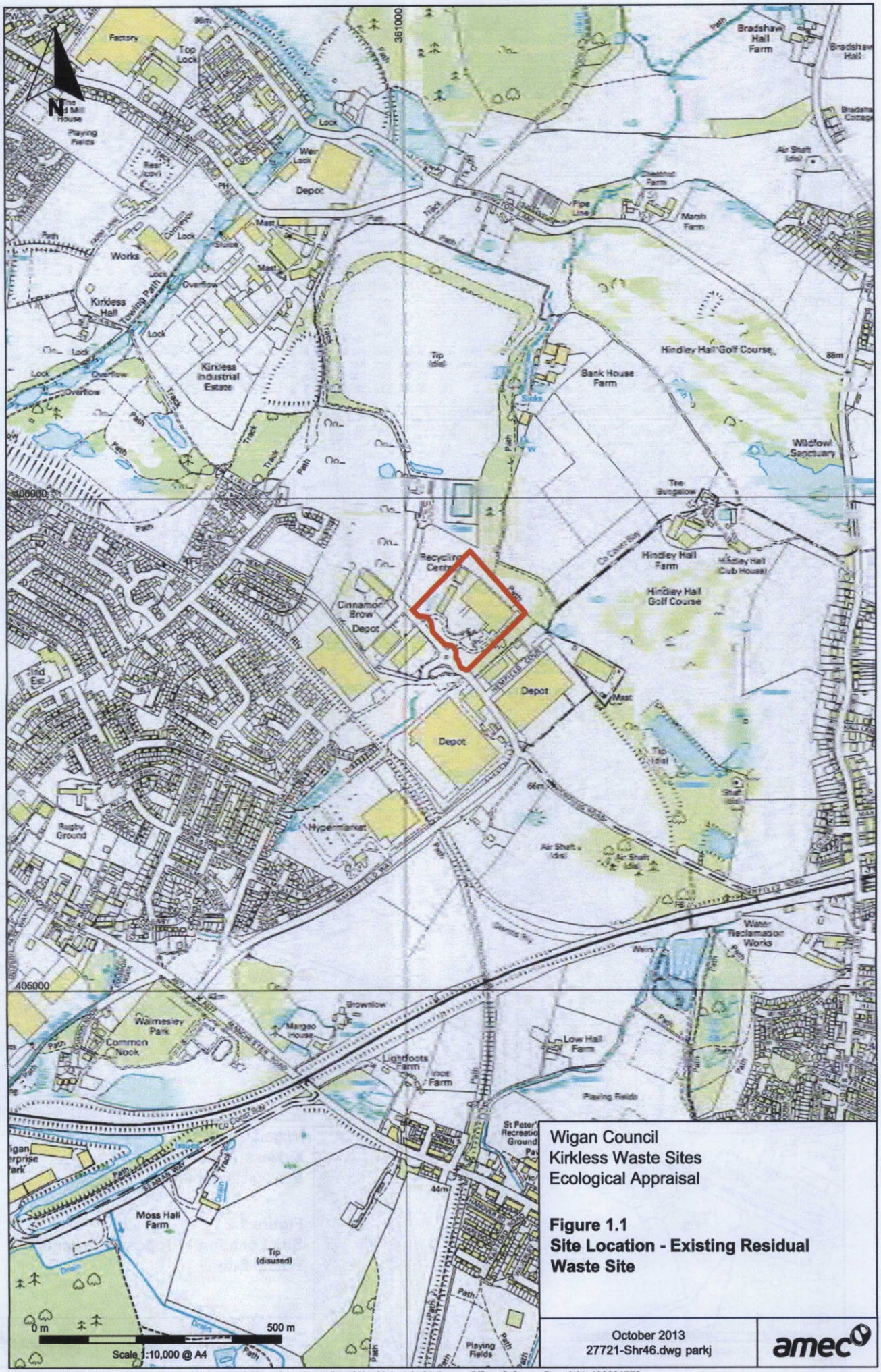
The proposed new Organic Waste Facility would be located adjacent to the west of the Existing Residual Waste Facility and approximately 3ha in extent. The specific operational land-use of this site once developed is not known. The construction programme and planning application timescales for this site are not currently known.

1.3 Objectives

The objectives of the study were to:

- Assess the general ecological value of the facilities and immediate surrounds, and the potential for protected species to be present;
- Identify potential ecological constraints to future development proposals;
- Provide outline recommendations in relation to appropriate mitigation measures or further specialist surveys as appropriate.

To achieve these objectives a desk-based study and various ecological surveys were undertaken.



Wigan Council
Kirkless Waste Sites
Ecological Appraisal

Figure 1.1
Site Location - Existing Residual Waste Site

October 2013
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Wigan Council
Kirkless Waste Sites
Ecological Appraisal

Figure 1.2
Site Location - Proposed Organic Waste Site

October 2013
27721-Shr47.dwg parkj

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2. Legislation and Policy Context

2.1 Overview

Developers and statutory operators have legal obligations to avoid/ limit effects upon protected sites, species and hedges under:

- *The Wildlife and Countryside Act 1981* (as amended) – statutory designated sites and species of National importance (in this context, England) ;
- *The Conservation of Habitats and Species Regulations 2010* (as amended) – statutory designated sites and species of European importance, and
- *The Hedgerow Regulations 1997* – hedgerows important at the National level.

Effects upon features of biodiversity value (designated sites, protected/notable flora and fauna) is also a 'material consideration' to the determination of any planning application by local authorities for applications under the *Town and Country Planning Act 1990*, and local authorities have a legal obligation to consider effects on biodiversity when exercising their functions under the *Natural Environment and Rural Communities (NERC) Act 2006*. In addition, guidance for Local Planning Authorities relating to biodiversity conservation is provided in the National Planning Policy Framework (DCLG, 2012) when determining planning applications.

These drivers are important because they set the context against which consenting authorities and consultees with a biodiversity conservation[1] remit will assess the potential ecological effects of the development and against which environmental measures to avoid/limit such effects will be derived.

2.2 Wildlife Legislation

2.2.1 Protected Species

Many species of animal and plants receive some degree of legal protection. There are two administrative levels of protection: European and National (in this context, England). 'European Protected Species' (also known in the industry as EPS) are protected at the European AND National level, whilst 'Nationally Protected Species' are protected solely at the National level.

For protected animals, the difference between the levels of protection between species/ species groups is subtle. In some cases, the animal AND its habitat where it resides (seeks shelter/ refuge/ protection/ where it breeds) is protected, whereas for other animal species it is only the animal that is protected and this protection can be full or

[1] In this context, Natural England, the Environment Agency and the Local Planning Authority

partial. Therefore understanding the subtle differences in the afforded protection is vital for ensuring that offences are not committed. The specific protection afforded to species/ species groups is detailed in Appendix A.

For the purposes of this study, legal protection primarily refers (but may not be limited) to:

- Species included on Schedules 1, 5 and 8 of the *Wildlife and Countryside Act 1981* (as amended), excluding species that are only protected in relation to their sale (see Section 9[5] and 13[2]);
- Species included on Schedules 2 and 5 of *The Conservation of Habitats and Species Regulations 2010* (the 'Habitats Regulations'); and
- Badgers, which are protected under the *Protection of Badgers Act 1992.*

2.2.2 Protected Hedgerows

It is a criminal offence to 'uproot or otherwise destroy' a 'protected hedgerow' meeting the criteria for a hedgerow under the *Hedgerow Regulations 1997* without prior notification to or prior consent from the Local Planning Authority and where none of the exemptions for the Electricity industry within the Regulations apply.

2.2.3 Protected Sites

Statutory Designated Sites

Natural England notifies sites that are of international or national importance for their nature conservation, geological or geomorphological value as Sites of Special Scientific Interest (SSSIs), although some sites that are of national importance for certain species have not been specifically designated. A selection of the very best SSSIs are also additionally designated as National Nature Reserves (NNRs) representing many of the finest wildlife and geological sites in the country.

SSSIs and NNRs are designated and legally protected under the Wildlife *and Countryside Act 1981*, as amended by the *Countryside and Rights of Way (CROW) Act 2000 and the Natural Environment and Rural Communities (NERC) Act 2006.*

Local Nature Reserves (LNRs) are statutory designated sites of local nature conservation importance.

Internationally important sites may also be additionally designated as Special Areas of Conservation (SACs), Special Protection Areas (SPAs) or Ramsar sites.

The network of European sites (also known as Natura 2000 sites) that occurs in the UK is identified and protected through the *Conservation of Habitats and Species Regulations 2010*, which is the UK's enactment of the EU Habitats Directive (Council Directive 92/43/EEC). The Natura 2000 network includes SPAs, SACs and is taken to include Ramsar sites. SPAs were specifically designated through the Birds Directive (Council Directive 79/409/EEC) and Ramsar sites through the ratified Ramsar Convention of 1971.

Non-statutory Designated Sites

Non-statutory designated sites are not strictly protected by legislation (hence the term 'non-statutory designated nature conservation sites'). Nonetheless, they receive a degree of indirect protection from development/activities via the *Town and Country Planning Act 1990* and *Natural Environment and Rural Communities (NERC) Act 2006.* This is because non-statutory designated sites are a 'material consideration' to the determination of planning applications by local authorities, and local authorities have a legal obligation to consider effects on biodiversity (including non-statutory designated sites) when exercising their functions.

Local Wildlife Sites are often designated alongside the statutorily protected areas. They constitute the most important sites for wildlife in each county, protecting threatened species and habitats, and acting as buffers, stepping stones and corridors between nationally-designated wildlife sites.

Non-statutory designated sites of county-level importance were known generically nationwide as County Wildlife Sites, but in recent times, more local authorities are terming these sites as Local Wildlife Sites, albeit various other acronyms still exist depending upon the county such as Sites of Importance for Nature Conservation (SINC).

2.3 Biodiversity Policy

2.3.1 Biodiversity Conservation at the Global, European and UK Level

The tenth Conference of the Parties (CoP10) to the Convention on Biological Diversity (CBD) held in Nagoya in October 2010, led to the adoption of a *Global Strategic Plan for Biodiversity 2011-2020* (Anon, 2010); an ambitious strategy adopted by 192 signatory countries to "*live in harmony with nature*". The Plan includes a 2050 vision, a 2020 'mission', five strategic goals and 20 targets known as 'Aichi Biodiversity Targets') agreed at the CBD meeting in Nagoya, Japan, in October 2010; and the new EU Biodiversity Strategy (EUBS) in May 2011.

At the European level, the EU 2020 Biodiversity Strategy (European Commission, 2011) was agreed in May 2011 and is the European Union's response to the mandate given by the *Global Strategic Plan for Biodiversity 2011-2020*, ensuring that the European Union meets its own biodiversity objectives and its global commitments.

In 1994, the UK Biodiversity Action Plan (UKBAP) provided individual Biodiversity Action Plans for certain 'priority habitats' and 'priority species' containing measures and targets required to protect, manage and enhance these features at the UK-level, ensure that the UK's commitment to the CBD was met. However due to devolution and the creation of country-level biodiversity strategies, much of the work previously carried out under the UK BAP is now focused at a country level through the UK Post-2010 Biodiversity Framework (JNCC, 2012). Additionally, international priorities have changed; the framework particularly sets out the priorities for UK-level work to support the Convention on Biological Diversity's (CBD's) *Strategic Plan for Biodiversity 2011-2020.* The Environment Departments of all four governments in the UK now work together through the Four Countries Biodiversity Group to set and achieve priorities for UK-level biodiversity conservation work, ensuring the UK's commitments are met under the Convention on Biological Diversity (JNCC, 2012). Nonetheless, the UK BAP lists of priority species and habitats remain important and valuable contextual reference and sources of information.

In addition, achieving benefits for people alongside biodiversity conservation is consistent with the central theme of the government's Natural Environment White Paper *The Natural Choice – Securing the Value of Nature* (HM Government, 2011) and builds on Defra's "*Delivering a healthy natural environment: An update to 'Securing a healthy natural environment: An action plan for embedding an ecosystems approach*" (Defra, 2010). In addition, HM Government (2011) recommended the establishment of landscape-scale Nature Improvement Area (NIAs). There are 12 of these distributed throughout England[2].

Biodiversity 2020 (Defra, 2011) outlines the UK Government's strategy for implementing the targets and actions of the EU 2020 Biodiversity Strategy within England, with a series of outcomes to be achieved by 2020. Similar strategies are also in place for Wales, Scotland and Northern Ireland[3] co-ordinated via the UK Post-2010 Biodiversity Framework (JNCC, 2012).

The four Strategy Priority Areas of *Biodiversity 2020* for England are:

- A more integrated large-scale approach to conservation on land and at sea;
- Putting people at the heart of biodiversity policy;
- Reducing environmental pressures;
- Improving our knowledge.

The success in meeting these strategic goals is measured using a set of 24 indicators. The 24 indicators comprise 42 individually assessed measures. The indicators cover a broad range of ecological, physio-chemical and socio-economic attributes in an integrated holistic approach to biodiversity conservation.

2.3.2 UK Planning Policy and Biodiversity

Chapter 11 '*Conserving and Enhancing the Natural Environment*' of the National Planning Policy Framework (DCLG (2012) sets out a number of objectives for local planning authorities when deciding on spatial planning policy and when determining planning application in relation biodiversity conservation. The key themes that developers and operators should be aware of are as follows:

- "*The planning system should contribute to and enhance the natural and local environment by... minimising impacts on biodiversity and providing net gains in biodiversity where possible, contributing to the Government's commitment to halt the overall decline in biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*;
- *Local planning authorities should set criteria based policies against which proposals for any development on or affecting protected wildlife sites...will be judged. Distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks;*

[2] See http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/funding/nia/projects/default.aspx

[3] Available at: http://wales.gov.uk/topics/statistics/headlines/environment2012/120725/?lang=en ; http://www.scotland.gov.uk/Publications/2013/06/5538 and http://www.doeni.gov.uk/nibs_2002.pdf

- *When determining planning applications, local planning authorities should aim to conserve and enhance biodiversity by applying the following principles: if significant harm resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused; proposed development on land within or outside a Site of Special Scientific Interest likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted;*

- *opportunities to incorporate biodiversity in and around developments should be encouraged;*

- *planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss;*

- *By encouraging good design, planning policies and decisions should limit the impact of light pollution from artificial light on...nature conservation...''*

The above is in addition to individual Local Planning Authority guidance and the Standing Advice on protected sites and species from Natural England in relation to planning applications[4].

2.3.3 Local Biodiversity Action Plans

Local Biodiversity Action Plans (LBAPs) are in place for each Local Planning Authority area in England and these identify the important species and habitats in each administrative area that require protection, management and enhancement; thereby ensuring local priorities help meet national targets.

LBAPs tended to follow the themes and individual habitats and species plans of the UKBAP. These LBAPs vary considerably from county to county in terms of scope and relevance. This is because the UKBAP has been superseded, and also because Departmental streamlining of services in recent times within Local Planning authorities and local Natural England offices has, in some counties, impinged upon the ability of local Biodiversity Partnerships/Steering Groups to update and administer LBAPs. That said, certain Local Planning Authorities in England have recently aligned their LBAP to reflect the objectives and vision of Biodiversity 2020.

Commensurate with the 12 national Nature Improvement Areas (NIAs), certain Local Planning Authorities have also established similar landscape-scale designations (e.g. Strategic Nature Areas in Gloucestershire).

The Greater Manchester Biodiversity Action Plan (GMBAP) was derived in 2003 and updated in 2009 (Greater Manchester Biodiversity Project, 2009). Certain habitat action plans within the GMBAP are relevant context for this development including 'Grassland' 'Ponds' and 'Native Woodlands'.

[4] Available at http://www.naturalengland.org.uk/ourwork/planningdevelopment/spatialplanning/standingadvice/advice.aspx

3. Methodology

3.1 Desk-based Assessment

Upon commissioning, a consultation and data collation exercise was undertaken to check for existing records of protected/ notable species at or within 1km of the site, and statutory and non-statutory designated wildlife sites and important habitat features occurring at or within 2km of the site.

The following sources were contacted/ viewed:

- Greater Manchester Ecology Unit (GMEU) who hold information on non-statutory designated sites, and species records including the local Wildlife Trust records and local bat group records (South Lancashire Bat Group); and
- The Government environmental information partnership project website at http://magic.defra.gov.uk/MagicMap.aspx - for information on statutory designated sites and UKBAP habitats/notable UK habitats

The geographical context of the two facility locations was examined using the freely available Ordnance Survey and satellite mapping service at Where's the Path (Where's the Path, 2013) along with freely available web-based aerial photographs available at Google Maps (Google, 2013). These were used to identify the presence of ponds within 250 m which may be suitable for breeding great crested newt (*Triturus cristatus).*

3.2 Extended Phase I Habitat Survey

A daytime visit was made to the two facility locations on 20th March 2013 by experienced AMEC Ecologist Caroline Mellor[5], to carry out the Extended Phase 1 Habitat Survey of the two facility locations and immediate surrounding land within 50m where access was possible. Phase 1 Survey is a standardised method of recording habitat types and characteristic vegetation, as set out in the "Handbook for Phase 1 Habitat Survey – a technique for Environmental Audit" published by the Joint Nature Conservation Committee (JNCC, 2010). This is 'extended' through the additional recording of specific features indicating the presence, or likely presence, of protected species or other species of nature conservation significance.

Land where access was restricted was viewed remotely at distance, and cross- referenced with freely available web-based aerial photography at Google Maps (http://maps.google.co.uk/maps) (Google, 2013).

An Extended Phase 1 Habitat Survey is not a full protected species survey and nor is it a botanical survey. Instead it is a method by which to enable an assessment of the likely nature conservation value of a site and an estimate of the magnitude of potential effects on species and habitats. It also enables the scope of further detailed survey work

[5] Caroline Mellor BSc MSc MCIEEM is a Senior Ecologist with over 10 years professional ecological experience and is a Full Member of the Institute of Ecology and Environmental Management (MCIEEM).

(e.g. for protected species) to be determined; such surveys would be required to fully ascertain the specific value of certain features (e.g. a protected species).

3.3 Great Crested Newt Surveys

3.3.1 Habitat Suitability Index (HSI) and Pond Screening Survey

Waterbodies at/within 250 m of the two facility locations were subject to a pond screening exercise which involves collecting a variety of information on each waterbody using the Habitat Suitability Index (HSI) assessment (Oldham *et al.*, 2000). The search area of 250 m was chosen using professional experience and judgment, acknowledging that 250m is the upper limit over which most great crested newts typically disperse from breeding waterbodies (English Nature, 2001; Langton *et al.*, 2001).

The Habitat Suitability Index provides a method for assessing water bodies for the likely occurrence of great crested newts. All accessible ponds and suitable ditches were recorded and details of ten environmental variables were collected. These were: geographic location; pond area; pond permanence; water quality (based on invertebrate assemblage); pond shading; number of waterfowl present; occurrence of fish; pond density; terrestrial habitat quality; and macrophyte cover.

For each of these criteria a scale between 0 and 1 is awarded according to the observation made. The ten variables are then multiplied together, and subsequently divided by ten to provide an overall HSI score, along with a classification of the habitat quality for great crested newt. It is important to realise that the HSI is not a substitute for a detailed survey, but can serve to indicate where survey effort should be concentrated.

The scores were converted into a qualitative rating scale, based around a system devised by Lee Brady (ARG UK, 2010) where waterbodies are assigned a score of 'poor', 'below average', 'average', 'good', or 'excellent'.

Ponds that scored "poor" would not be excluded from survey on the basis of the HSI assessment alone. Such a score does not preclude the possibility of great crested newt being present. More so, following the HSI assessment, all waterbodies were subject to a further number of tests to determine the likely risk of works impacting upon great crested newts. These were:

- Whether the waterbody was considered unsuitable for great crested newts by expert opinion (i.e. fisheries, slurry tanks and garden ponds were excluded if considered totally unsuitable);
- Whether there are suitable aquatic and/or terrestrial habitats present within the two facility locations;
- Whether there are suitable habitat connections between a waterbody and the two facility locations; and
- Whether there are significant barriers to newt dispersal (i.e. main roads such as motorways, trunk roads (English Nature, 2003) and main "A" classified roads and main rivers).

The above information will inform the scope of more detailed presence/ absence surveys for great crested newts, and would be needed in the event of a applying for a mitigation licence.

3.3.2 Presence/ Absence Surveys

In accordance with survey guidance (English Nature, 2001) surveys must comprise a minimum of four surveys on separate occasions to any pond within ~250m using three survey methods (ranging from egg searching, netting, torching and bottle trapping). Surveys must be undertaken within the survey period of mid-March to mid-June with a minimum of 2 between mid-April and mid-May, and must occur in suitable weather conditions (i.e. avoiding heavy rain and/or strong winds and/or night time temperatures at or below 5 °C), to comply with the guidance.

However, due to the severe and/or unsuitable wintry weather that occurred throughout March and April, the overnight minimum temperatures were not suitable for great crested newt surveys until mid-May. Surveys were therefore undertaken between 15th May and 4th June 2013 to allow for the delayed start and shift in the great crested newt breeding season.

Surveys were conducted using licensed and experienced amphibian surveyors and in suitable weather conditions (i.e. avoiding heavy rain and/or strong winds and/or night time temperatures at or below 5 °C).

3.4 Reptile Surveys

In accordance with Gent and Gibson (1998) and Froglife (1999), the two waste facility locations were subject to 7 survey visits to detect presence/ absence using the method of placing and checking artificial refugia as follows:

- Artificial refugia, comprising roofing felt squares, each measuring 0.5m x 0.5m, were laid out at locations considered to have the highest potential to support reptiles. The refugia consisted of 40 roofing felt squares. Refugia were placed at a density of between five and ten refugia per hectare of suitable habitat. The reptile mats were laid in groups of 5 at 8 locations (15 in the existing Residual Waste Facility and 25 in the Proposed Organic Waste Facility). Survey visits involved looking for reptiles under, on top of or next to these refugia.

The artificial refugia were distributed around the identified survey locations on 12th April 2013, to allow reptiles to become accustomed to the refugia prior to the start of the survey and for the refugia to 'bed-in' to the vegetation and ground (become more suitable). It is recognised that the Froglife and Herpetofauna Workers' Manual guidelines recommend that surveys are carried out during the peak months of April, May and September; however, because the weather in April and May rarely reached the optimum conditions (~9-18°C, dry with little to no wind) the surveys were therefore carried out during May, June and July 2013. A total of seven surveys were completed within the survey area, all of which had weather and temperature conditions within the optimum range, in accordance with guidance.

In addition, the following were also undertaken when on-site during the Extended Phase 1 Habitat Survey and great crested newt surveys:

- Direct observation – Early morning/ afternoon walkover surveys were undertaken to record the locations of any basking or foraging animals. Sunny spots were located to look for basking animals, with the sun behind the surveyor so that shadows did not disturb basking individuals. In addition to walkover surveys, stationary vantage points were selected for 30 minute periods of direct observation. Observations also included searches for sloughed skins;

- Refugia searches – A selection of existing potential refugia were carefully searched for reptiles; especially log-piles, rubble and discarded wood or old carpet.

4. Results

4.1 Desk-based Assessment

The location and extent of statutory and non-statutory designated wildlife sites occurring within 2km of the two waste facilities is shown on Figure 4.1, and described in more detail below.

4.1.1 Statutory Designated Sites

Information returned from the desk study indicates there is one statutory designated site within 2km of the two waste facility locations; namely, Borsdane Wood Local nature Reserve (LNR) situated approximately 0.7km east of the two facility locations. The LNR is designated for ancient semi-natural woodland (ASNW).

4.1.2 Non-Statutory Designated Sites

There are nine Sites of Biological Interest (SBI) within 2km of the two waste facility locations:

- Kirkless Lane SBI is partially located within the northern boundary of the propsoed Organci Waste Facility location and approximately 0.075km north. It is designated for great crested newt and 'secondary' habitat;
- Hindley Deep Pits SBI is located approximately 0.2km south-east of the two waste facility locations and is designated for woodland and bird interest;
- Bordane Wood West SBI is located approximately 0.7km east of the two waste facility locations and is designated for ancient semi-natural woodland;
- Woodshaw Colliery SBI is located approximately 0.75km north of the two waste facility locations and is designated as a former colliery site now with woodland;
- Bordane Wood East SBI is located approximately 1.5km east of the two waste facility locations and is designated for ancient semi-natural woodland;
- Meadow near Kirkless Hall SBI is located approximately 0.9km north-west of the two waste facility locations is designated for meadow habitat and great crested newts;
- Amberswood Common SBI is located approximately 1km south-west of the two waste facility locations and is designated for a mosaic of habitats on site including woodland, ponds and watercourses;
- Leeds Liverpool Canal – Adlington to Wigan (South) is located approximately 0.75km north-west of the two waste facility locations and is designated for the canal and associated habitats and fauna;
- Haigh Plantations SBI is located approximately 2km from the two waste facility locations and is designated for a mosaic of habitats including woodland, ponds and watercourses.

There are no Nature Improvement Area (NIAs) within 2km of the two waste facility locations[6].

4.1.3 Notable Habitats

The following UKBAP priority habitats occur within 1km of the two waste facility locations:

- Fens (located to the south);
- Deciduous Woodland (at various locations around the two waste facility locations).

No LBAP habitat information was returned from the records centre.

4.1.4 Species

Ponds and Great Crested Newt

By reference to freely-available web-based aerial photography, Ordnance Survey maps and previous ecological data there appeared to be 7 ponds within 250m of the two waste facility locations.

There is one record of the European protected great crested newt between 250m and 500m north of the two waste facility locations and four further records of great crested newts more than 500m from the two waste facility locations.

Other Protected/ Notable Species

A range of other protected and notable species records were obtained from Greater Manchester Ecology Unit (GMEU), as occurring within 1km of the two waste facility locations, as described in more detail in Table 4.1. Records were excluded where no six figures grid references were present.

[6] See http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/funding/nia/projects/default.aspx

Table 4.1 Protected and Notable Species within 1km of the Tow Waste Facility Locations

Binomial	Common Name	Legal Protection/ Notable Status	Distance from Site		
			0-250 m	250-500 m	>500 m
Protected species					
Pipistrellus pipistrellus	Common pipistrelle	CHSR, WCA Schedule 5, UK BAP		2	5
Pipistrellus pygmaeus	Soprano pipistrelle	CHSR, WCA Schedule 5, UK BAP			1
Plecotus auritus	Brown long-eared bat	CHSR, WCA Schedule 5, UK BAP			1
Nyctalus noctula	Noctule bat	CHSR, WCA Schedule 5, UK BAP			1
Myotis natterii	Natterer's bat	CHSR, WCA Schedule 5, UK BAP			1
Triturus cristatus	Great crested newt	CHSR, WCA Schedule 5, UK BAP		1	4
Arvicola amphibious	Water vole	WCA Schedule 5, UK BAP			2
Sub-totals			**0**	**3**	**15**
Totals			**18**		
Conservation notable species					
Bufo bufo	Common toad	UKBAP			1
Lepus europeaus	Brown hare	UKBAP			1
Sub-totals			**0**	**0**	**2**
Totals			**2**		

Table Notes: CHSR: *Conservation of Habitats and Species Regulations 2010* (as amended); WCA5: *Wildlife and Countryside Act 1981* (as amended); UK BAP: UK Biodiversity Action Plan; LBAP: Local Biodiversity Action Plan (Wigan)

4.2 Extended Phase 1 Habitat Survey

4.2.1 Habitats and Vegetation

The Existing Residual Waste Facility comprises predominantly buildings and hardstanding interspersed with localised areas of amenity grassland. Plantation woodland occurs along the south-eastern boundary; whilst semi-improved neutral grassland with scattered trees and scattered scrub is located along the north-western and north-eastern boundary. A ditch is located close to the western perimeter and there are 5 other waterbodies located off-site to the north and west within 250m.

The new proposed Organic Waste Facility location comprises predominantly semi-improved neutral grassland with scattered trees and scattered scrub, interspersed with smaller areas of bare ground and dense scrub. A large area of plantation woodland is present in the western half of the facility location. A road bisects the facility location in tow. Two waterbodies occur on-site; a further four waterbodies off-site within 250m.

The habitats identified are shown in Figure 4.2 along with numbered Target Notes (TN) locations. Detailed Target Notes are provided in Appendix B.

The main habitats and land-use present across the two waste facility locations are:

- Woodland (broadleaved plantation woodland);
- Scattered trees;
- Grassland (amenity and semi-improved);
- Scrub (dense and scattered);
- Bare ground (rubble);
- Buildings;
- Hardstanding; and
- Waterbodies (ponds).

A number of these habitats have potential to support protected and notable species. A more detailed description of the habitats is provided below.

Broadleaved Plantation Woodland

The broadleaved plantation woodland which has been planted recently as a screening for the commercial/industrial buildings. All of the trees are immature and are ~10-15years old. Species present include silver birch (*Betula pendula*), alder (*Alnus glutinosa*) and aspen (*Populus tremula*). The ground flora is semi-improved grassland, species can be found below.

Scattered Trees

The scattered immature trees that are present include alder, silver birch and aspen. The trees are all of similar height and are ~10-15 years old. There are therefore no individual mature/ over mature trees present that are considered to be of potential arboricultural value (based upon their age, size and/or the presence of valuable features).

Scattered and Dense Scrub

Scattered areas of bramble dense areas of bramble (*Rubus fruticosus* agg.) and broom (*Cytisus scoparius*) are present.

Amenity Grassland

There are small areas of amenity grassland that are regularly managed. Species include perennial rye grass (*Lolium perenne*).

Semi-improved Neutral Grassland

This grassland does not appear to be regularly managed and the species present include cock's-foot (*Dactylis glomerata*), Yorkshire fog (*Holcus lanatus*), reed canary grass (*Phalaris arundinacea*), red fescue (*Festuca rubra*), ribwort plantain (*Plantago lanceolata*) and cleavers (*Galium aparine*).

Within the semi-improved neutral grassland there are several earth mounds (Target Note 1) which may also have rubble within them.

Hard Standing

These areas comprise tarmac roads, car parks and pavements.

Bare ground

A large area of rubble including large pieces of concrete and clinker is present (Target Note 2).

Buildings

Within the east of the site there are three buildings. All of the buildings are large corrugated metal buildings with a brick wall to 2m from the ground. The buildings are used as an amenity waste area. One of the buildings is open sided.

Waterbodies

A total of seven waterbodies were identified at/within 250m of both waste facility locations. The suitability of these for great crested newt is described in more detail in Section 4.3.

Important Hedgerows

There are no hedgerows at or within 50m of the two waste facility locations. site and therefore important hedgerows are not considered further in this report.

4.3 Fauna

4.3.1 Great Crested Newt

Seven ponds were identified within 250m of the two waste facility locations during the desk study. There is one historical record of the species 250m to the north. Therefore it was considered that pond screening and a HSI survey was required of the 7 waterbodies. The results are provided in Table 4.2. Five waterbodies were recommended for presence/ absence surveys.

Table 4.2 Waterbodies Screened for Great Crested Newt Breeding Potential

Pond Ref./ Target Note (TN)	Grid Reference	Location		Waterbody Present?	Brief Description of Waterbody	HSI Score and Category	Further Survey Required?
		Existing Facility	New Facility				
1	SD 609 058	Off-site (90m north-west)	On-site	Yes	Small waterbody (5x5m), considered to dry out every year, no fish or fowl present. Partially shaded by the grassland and trees. Water holds some invertebrates. Good terrestrial habitat and connectivity. Marginal and aquatic vegetation include soft rush (*Juncus effusus*) and reed canary grass (*Phalaris arundinacea*)	0.60 - Average	**Yes – great crested newt (GCN) presence/absence**
2a	SD 609 060	Off-site (150m north-west)	Off-site (15m north)	Yes	Medium sized waterbody (~30m x 30m), stickleback present, moorhen present. The waterbody is not considered to dry out. The waterbody is not shaded and the terrestrial habitat and connectivity is good. Several invertebrates were present. The marginal and aquatic vegetation include greater reedmace (*Typha latifolia*) soft rush and water plantain (*Alisma plantago-aquatica*).	0.87 – Excellent	**Yes – GCN presence/absence**
2b	SD 609 059	Off-site (190m north-west)	Off-site (30m north)	Yes	Small waterbody, considered to dry out every year, no fish or fowl present. Not shaded by the vegetation, water holds some invertebrates. Good terrestrial habitat and connectivity. The marginal and aquatic vegetation includes soft rush	0.59 – Below average	**Yes – GCN presence/absence**
3	SD 069 059	Off-site (130m north-west)	On-site	Yes	Small waterbody, considered to dry out sometimes, no fish or fowl present. Partially shaded by the grassland and trees. Water holds some invertebrates. Good terrestrial habitat and connectivity. Aquatic and marginal vegetation includes soft rush	0.70 – Good	**Yes – GCN presence/absence**
4	SD 611 056	On-site	Off-site (15m south-east)	Yes	Small linear waterbody, not considered to dry out, is completely shaded by the surrounding vegetation. The terrestrial habitat and connectivity is moderate, however, the pond is polluted and has minimal invertebrates and no aquatic vegetation. No fish or fowl are present.	0.34 – Poor	**Yes – GCN presence/absence**

Table 4.2 (continued) Waterbodies Screened for Great Crested Newt Breeding Potential

Pond Ref./ Target Note (TN)	Grid Reference	Location		Waterbody Present?	Brief Description of Waterbody	HSI Score and Category	Further Survey Required?
		Existing Facility	New Facility				
5	SD 610 060	Off-site (165m north)	Of-site (70m north)	Yes	Large waterbody, lined, no fish or fowl present. Considered never to dry out, has good terrestrial habitat and connectivity. Several invertebrates identified and partially shaded by surrounding vegetation. The aquatic and emergent vegetation within the pond includes soft rush and floating plantain.	0.92 – Excellent	**No – although the HSI score indicates that the pond could be suitable for great crested newts the pond is steep sided (preventing newt s exiting from the waterbody). Therefore the pond is not considered a source of dispersing GCN and was scoped out**
6	SD 611 059	Off-site (60m north)	Off-site (30m north)	Yes	Large waterbody, no aquatic vegetation, lines, no dish or fowl. Considered never to dry out and has good terrestrial habitat and connectivity.	0.86 – Excellent	**No – see Pond P5**

Five ponds were subject to presence/absence surveys between May 2013 and mid June 2013 on the following dates: 15th May, 23rd May 2013, 29th May 2013 and 4th June 2013.

No great crested newts were identified during the 4 great crested newt presence/ absence surveys to the 5 ponds, including Pond P2b situated within the Kirkless Lane SBI which is designated in part for GCN. Smooth newts and tadpoles were identified within ponds 1, 2b and 4 (Table 4.3). The detailed results are provided in Appendix C.

Great crested newt (GCN) is therefore considered to be probably absent and will not be discussed further in this report.

Table 4.3 Summary of Great Crested Newt (GCN) Survey Results

Pond Number	Survey	GCN Present (Y/N)
1	Presence/absence	N
2a	Presence/absence – dry on 3rd survey	N
2b (Kirkless Lane SBI)	Presence/absence	N
3	Presence/absence – dry on 4th survey	N
4	Presence/absence	N
5	Scoped out	N/A
6	Scoped out	N/A

4.3.2 Reptiles

No records of reptiles were identified during the desk study. Nonetheless, there are habitat features present that could provide suitable refuge and foraging opportunities for reptiles (Gent and Gibson, 1998; Froglife, 1999), including:

- Sunny, open, undisturbed, and often south-facing, dry, species-rich, open habitat with a mix of sparse and dense vegetation;
- Rough grassland, moorland, un-intensively managed farmland;
- Open woodland and woodland edge;
- Disused quarries and wasteland;
- Sunny hollows, banks and gullies;
- Disused rabbit warrens on dry, south facing banks;
- Still and running water; and

- Man-made features including disused railway lines, road/railway embankments/cuttings.

Reptile surveys were therefore undertaken and the results of the surveys are presented in Table 4.4. No reptiles were recorded and it is therefore considered that reptiles are probably absent and will not be discussed further in this report.

Table 4.4 Reptile Survey Dates and Weather Conditions

Survey no.	Survey area	Date	Temperature °C	Cloud cover%	Wind speed	Rain	Weather conditions
1	Whole site	13/05/2013	10	25	None	None	Excellent
2	Whole site	13/05/2013	12	30	None	None	Excellent
3	Whole site	23/05/2013	14	80	High	None	Moderate
4	Whole site	04/06/2013	14	10	Low	None	Moderate
5	Whole site	11/07/2013	18	35	None	None	Excellent
6	Whole site	18/07/2013	18	50	None	None	Excellent
7	Whole site	22/07/2013	16	60	None	None	Excellent

4.3.3 Bats

Potential Roosting Habitat

There are no trees present that have the potential to support roosting bats. The trees are all immature and do not have any roosting features such as frost cracks, broken limbs, rot holes, ivy cladding or epicormic growths. The three buildings within the Existing Residual Waste Facility are tall metal warehouse structures with sheet metal sides and rooves and are therefore considered unsuitable for roosting bats.

Therefore it is considered that roosting bats are probably absent and will not be considered further within this report.

Commuting and Foraging Habitat

Suitable foraging habitat for bats can be found within the semi-improved grassland and broadleaved plantation woodland.

Connectivity in the form of linear features, including the edges of the broadleaved plantation woodland, to allow bats to commute between roosting and foraging habitats are present. Therefore it is considered that the two waste facility locations could support several species of foraging and commuting bats.

4.3.4 Water Vole

No evidence of water vole was found within any of the waterbodies or within ~50m. The ponds are isolated from any other ponds within the wider area and the banks provide negligible potential to support water vole burrows (sparse/ no vegetation/ artificial banks). Also several of the ponds are considered to dry up annually and therefore are not considered to be suitable for water voles.

There are no watercourses within the site or up to ~50m. Therefore it is considered that water voles are probably absent and will not be considered further within this report.

4.3.5 Otter

No evidence of water vole was found within any of the waterbodies or within ~50m.

There are no overhanging tree routes or dense scrub to provide natal habitat, holts or lay-up sites. Therefore it is considered that otters are probably absent and will not be considered further in this report.

4.3.6 Badger

No setts or signs of foraging badger were identified. Therefore it is considered that badger is probably absent and will not be considered further in this report.

4.3.7 Birds

The mosaic of semi-improved grassland, broadleaved plantation woodland, bare ground and waterbody habitats within and adjacent to the site are potentially suitable as foraging and/or breeding habitat for a range of individual or small populations of bird species, some of which may be conservation notable permanent UK residents including song thrush (*Turdus philomelos*) (hedges/ scrub/ woodland edge), or migratory over-wintering species such as redwing (*Turdus iliacus*).

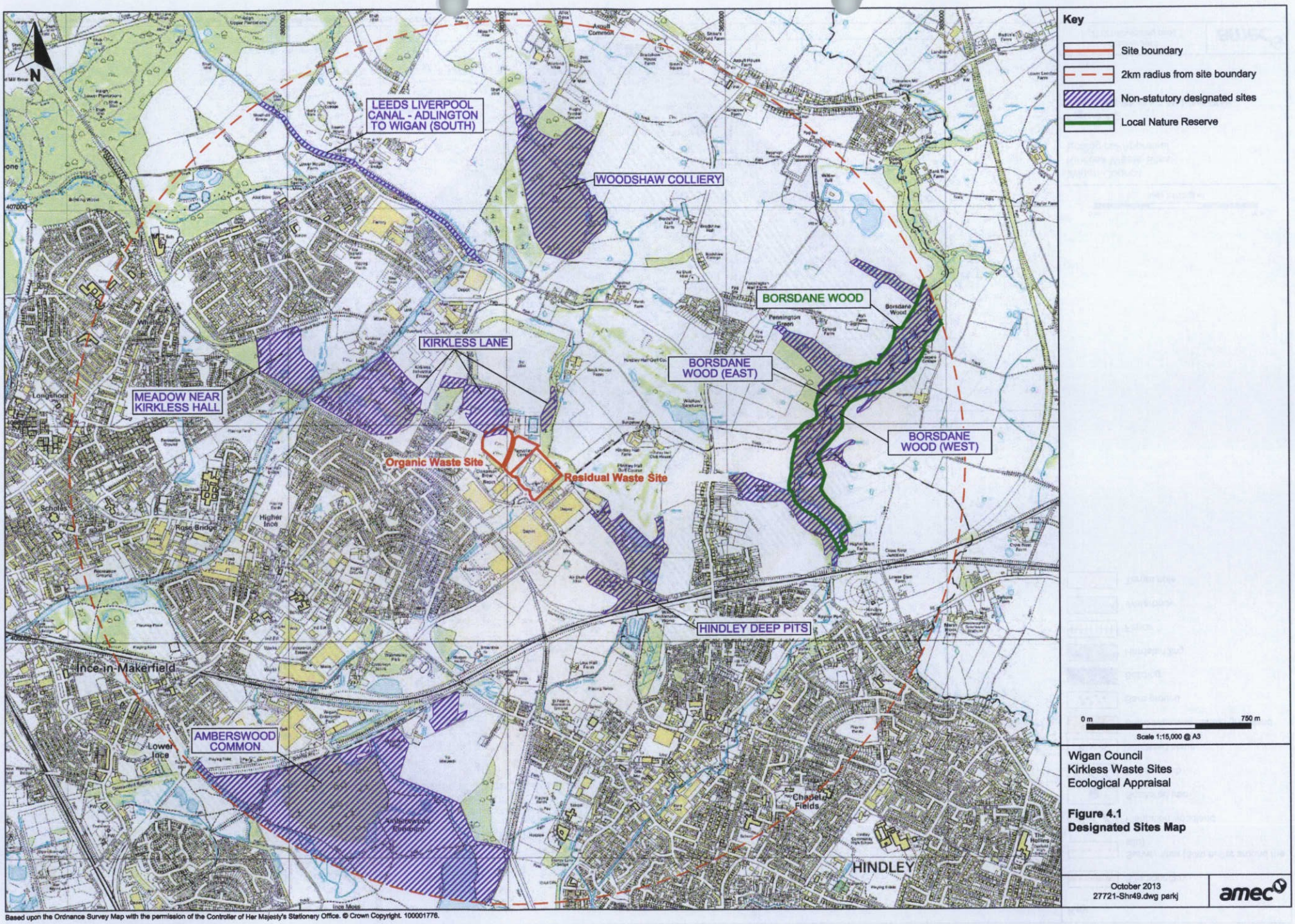
No Schedule 1 bird species were seen or heard and no nests or nesting behaviour was identified during the Extended Phase 1 Habitat Survey, great crested newt surveys or reptile surveys.

4.3.8 Other Conservation Notable Species

The habitats present have the potential to support limited numbers of other conservation notable species including common toad (*Bufo bufo*) and (*Erinaceous europaeus*) which were formerly UKBAP priority species.

4.3.9 Invasive Plant Species

No invasive non-native plant species were recorded during the field survey.

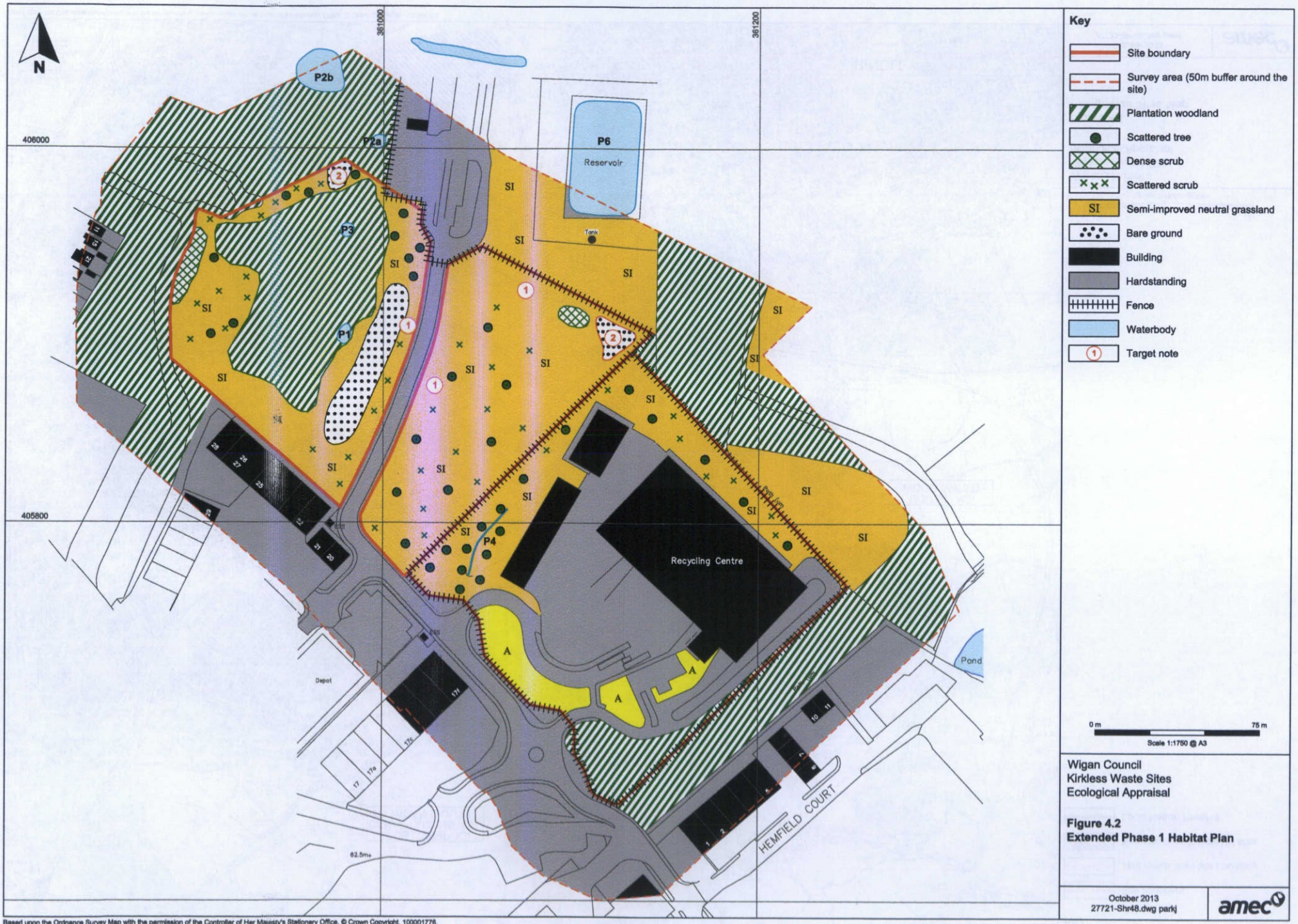


Wigan Council
Kirkless Waste Sites
Ecological Appraisal

Figure 4.1
Designated Sites Map

October 2013
27721-Shr49.dwg parkj

amec



Wigan Council
Kirkless Waste Sites
Ecological Appraisal

Figure 4.2
Extended Phase 1 Habitat Plan

October 2013
27721-Shr48.dwg parkj

amec

5. Limitations

5.1 Extended Phase 1 Habitat Survey

The Extended Phase 1 Habitat survey was undertaken towards the end of March, just outside of the optimal period (between April to September inclusive), as set out in current survey guidance (JNCC, 2010). This potentially places some limitations on the identification of botanical species present within the habitats. Nonetheless the survey was conducted by an experienced field ecologist adept at identifying the main ecological constraints that may be presented by or supported in commonly-occurring lowland semi-rural habitats of limited nature conservation value such as those present (see Section 6).

Access to some adjacent land was not possible during the survey, and vegetation and habitats surrounding the tow waste facility locations were not inspected directly. However they were viewed remotely and/or cross referenced to freely-available web-based aerial photography, which provided sufficient detail to characterise the main habitats present on adjacent land.

It is therefore considered that the survey provides a robust basis to inform a professional judgement on the broad ecological value of the tow waste facility locations, the potential ecological constraints present, and will adequately inform recommendations for further survey and/or mitigation (if required) to confirm absence or otherwise of certain potential constraints.

5.2 Tree Descriptions

The description of trees presented in this report does not represent an arboricultural survey. Such a survey would need to be undertaken in accordance with BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*.

5.3 Great Crested Newt

Two ponds (P5 and P6) were not accessible due to presence of perimeter fencing and due to concerns over being able to safely survey these ponds (the ponds had steep sides). Nonetheless, for the reasons described in Table 4.2 these were scoped out of the ecological appraisal.

Due to the severe and/or unsuitable wintry weather that occurred throughout March and much of April, the overnight minimum temperatures were not suitable for GCN surveys on the other 5 ponds until May. Surveys were undertaken between 15th May and 4th June 2013.

In the north Midlands where we were undertaking other great crested newt surveys, the peak count was obtained on the 17th June indicating that the peak breeding period (normally mid-April to mid-May) had been delayed until June and GCN eggs were still being recorded from ponds in the north Midlands on 29th June 2013 indicating that the GCN breeding season had been extended to beyond mid-June in 2013. This is most likely due to the bad weather

that occurred in March and April as described above which delayed the start of the breeding season, delayed the peak breeding season into June, and extended the typical breeding season into July (since the eggs found at the end of June would be developing in July). It is considered, using our professional judgement, that the overall GCN breeding season, and the peak GCN breeding period within the breeding season was also similarly delayed into June at Wigan.

Only 2 surveys were conducted at Pond 2a before it dried at the end of May. Only 3 surveys were undertaken at Pond P3 before it dried up in early June. It was not possible to complete the requisite 4 surveys at these ponds within the prevailing time available before the ponds dried up, due to the unseasonably cold weather that precluded GCN surveys being undertaken any earlier (as described above). Nonetheless, it is reasonable to assume that had GCN been present then at least some evidence of their presence would have been detected in the surveys that were undertaken.

The water depth in Pond 4 was too shallow to bottle trap throughout the survey period. Bottle trapping was suspended in Pond P3 due to the presence of water shrew (*Neomys fodiens*) which could be harmed by the use of bottle traps. Netting was employed as an alternative method of detecting GCN in place of bottle trapping.

Surveys were conducted using licensed and experienced amphibian surveyors, in suitable weather conditions (i.e. avoiding heavy rain and/or strong winds and/or night time temperatures at or below 5 °C), and using the recommended 3 of 4 available survey methods during each survey visit.

On the basis of the above, it is therefore considered the survey provides a robust basis to inform a professional judgement on the probable absence of great crested newt and will adequately inform recommendations for the proposed development.

5.4 Other Species

The lack of evidence of a protected species does not preclude their possible presence at a later date. This is particularly true of mobile species such as bats, badger, and birds; their use of a particular feature can significantly vary, not only on a seasonal basis, but also from day to day. Any survey represents only a snapshot in time and is only considered to be valid for restricted period of time, depending upon the species/ species group and habitats/ structure surveyed. Therefore consideration should be given to the need to update the survey data in the future in the event of substantial delay to the commencement of development at the two waste facilities.

6. Conclusions and Recommendations

6.1 Overview

The following conclusions have been drawn, and recommendations made, based upon the information obtained to date about the ecological value of the two waste facility locations, the habitats present, and their potential to support protected/ notable species, and certain species surveys undertaken for reptile and great crested newt. This assessment is based upon the assumption that development will be restricted to the boundaries shown on Figures 1.1 and 1.2, and will seek to maximise as much as possible landtake within the two waste facility locations.

Should off-site access works be part of future development, for example requiring vegetation removal, then further survey of these adjacent habitats and/or mitigation in respect of other protected species may be required.

The detailed layout, final landuse or planning application timescales for the two waste facilities are not known at this stage. Therefore it is not possible to present a detailed mitigation strategy below, only key recommendations, principles and issues that would need to be taken into account when producing a planning application and taken into account when deriving/undertaking ecological mitigation.

It is envisaged and recommended that a suitably experienced ecologist would be appointed to revisit this appraisal (to check it is still relevant and valid to any applications made) and update if necessary. It is then also envisaged and recommended that the ecologist would produce a detailed mitigation strategy for the proposals once further information about the development, timescales and layout is provided by the developer.

6.2 Designated Sites

Part of Kirkless Lane SBI is situated within the northern boundary of the proposed new Organic Waste Facility location. It is recommended that development should not encroach any closer than 50m from the Kirkless Lane SBI boundary to:

- avoid direct landtake of the habitats within the SBI; and
- limit unintentional indirect off-site effects such as littering or trampling.

All other designated sites are at least 0.2km away and it is considered the potential detrimental indirect effect (if any) on such sites would be intangible and negligible by consideration of:

- The absence of a direct hydrological or physical connection between the two waste facility locations and such sites;
- The controlling mechanisms that will be implemented under the permit for the waste facilities which will control site-derived emissions/ pollutants during operation;

- The type of development proposed and biodiversity features known to be present (as established during the course of preparing this ecological appraisal);
- The best practice pollution prevention measures that would be implemented during construction (Section 6.5).

6.3 Habitats and Vegetation

Some of the habitats on-site could be considered to fall into fall into the category of several habitat action plans in the LBAP, including 'Grassland' and 'Native Woodlands' and 'Ponds'. However the habitats present are:

- limited in extent;
- not botanically diverse;
- only recently established;
- typical of those found in all semi-urban areas across lowland England and not particularly notable examples.

Nonetheless, collectively the two waste facility locations do contain a mosaic of habitats and are considered to represent a locally valuable 'ecological stepping stone' between the designated wildlife sites in the wider landscape and within an otherwise semi-urbanised landscape, provide opportunities for a range of animals.

Therefore to ensure this function as a locally valuable ecological stepping stone is maintained, ensure animals continue to be supported, and to ensure no net loss of local biodiversity, it is suggested that the site-layout proposals:

- seek to retain and/or incorporate new, contiguous, semi-natural woodland using native tree stock and native ground flora within the layout, particularly around the periphery of the facility locations;
- seek to incorporate new, planted, contiguous species-rich hedges and scrub with native species of local provenance within the layout, around the periphery of the facility locations;
- seek to retain and/or incorporate large areas of rank grassland and botanically diverse semi-improved neutral grassland within the facility locations;
- seek to replace any lost trees. Any individual trees retained should be protected from works occurring under the tree canopy, and the same applies to the edges of woodland. This should be undertaken in accordance with the relevant guidance (currently BS 5837:2012 *Trees in relation to design, demolition and construction – Recommendations*).

Should the above recommendations be incompatible with the need to maximise the layout for the proposed development, then the site developer should consider identifying an off-site area within it/or the site operator's ownership that can be retained, enhanced and managed in the medium term (>2 years) for wildlife.

6.4 Protected/ Notable Species

No species action plans within the LBAP are considered relevant to the proposals. Various species/ species groups are considered probably absent as described in Section 4 with the exception of those described below.

6.4.1 Protected Species Groups

Foraging Bats

The measures proposed in Section 6.3 will ensure that the two waste facility locations continue to provide opportunities for a range of wildlife, including foraging bats.

In addition exterior lighting operated by the waste facilities should not shine directly onto or in close proximity to (within 50m) of the edges of woodland to avoid disturbing foraging bats.

Breeding Birds

The scrub and trees all offer potential nesting and foraging habitat and are likely to be used for breeding/ nesting by a range of common and some conservation notable bird species during the breeding season. Ground nesting birds, such as skylark may also breed/ nest in the rank grassland.

All breeding birds, their nest, eggs and young are protected against direct disturbance/ taking/ damage during the nesting season (nesting season taken to be generally from early March to early August inclusive). Therefore all works to any trees or scrub should be restricted to outside of the breeding bird season. Where this is not possible, a suitably experienced ecologist should be present to check for any nests prior to vegetation removal or any activities which may significantly disturb breeding birds. Where a nest is found to be present works should be prevented until the chicks have fledged and left the nest. This is because there is no mitigation licence available for development related activities affecting breeding birds.

6.4.2 Notable Species

Conservation notable species including common toad and hedgehog may use the piles of rubble (Target Notes 1 and 2) for refuge/ shelter. It is therefore recommended that these rubble piles are cleared during the period April to mid-October inclusive when night-time minimum temperatures are no lower than5 Celsius, and hand-searched immediately before clearance. Any resident amphibians/ mammals should be carefully moved by hand to suitable dense vegetation away from working areas.

6.5 Other Best Practice Recommendations

- Follow Environment Agency Pollution Prevention Guidelines during construction to limit/ avoid site-derived emissions/ pollutants from impacting habitats on-site and immediately off-site.

- All excavations should be covered overnight and flush at ground level. Alternatively, excavations should either contain sloping sides to allow animals to escape or alternatively be checked for animals each morning before works start in the excavation;

- Should any suspected protected species be encountered during construction, then all work must cease at that work location, and a suitably experienced ecologist consulted immediately for advice on how to proceed.

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Appendix A
Legal Protection Afforded to Certain Animals

Legally Protected Species: European Protected Species – (Including Bats, Great Crested Newt, Dormouse, and Otter)

These species/ species group (including all British bats) are listed in Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and Schedule 2 of the *Conservation of Habitats and Species Regulations 2010* (as amended). They are afforded full protection under Section 9(4) of the Act and Regulation 41 of the Regulations. These make it an offence, *inter alia*, to:

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb any such animal, including in particular any disturbance which is likely:
  - to impair its ability to survive, breed, or rear or nurture their young;
  - to impair its ability to hibernate or migrate;
  - to affect significantly the local distribution or abundance of that species.
- Damage or destroy a breeding site or resting place of any such animal;
- Intentionally or recklessly disturb any of these animals while it is occupying a structure or place that it uses for shelter or protection (for bats this is taken to mean all bat roosts whether bats are present or not); or
- Intentionally or recklessly obstruct access to any place that any of these animals uses for shelter or protection.

In addition, five British bat species are listed on Annex II of the Habitats Directive. These are:

- Greater horseshoe bat (*Rhinolophus ferrumequinum*);
- Lesser horseshoe bat (*Rhinolophus hipposideros*);
- Bechstein's bat (*Myotis bechsteinii*);
- Barbastelle (Barbastella barbastellus);
- Greater mouse-eared bat (*Myotis myotis*).

In certain circumstances where these species are found the Directive requires the designation of Special Areas of Conservation (SACs) by EC member states to ensure that their populations are maintained at a favourable conservation status. Outside SACs, the level of legal protection that these species receive is the same as for other bat species.

Legally Protected Species: Nationally Protected Species – Badger

The Protection of Badgers Act 1992 consolidates previous legislation (including the Badgers Acts 1973 and 1991 Badgers (Further Protection) Act 1991). It makes it a serious offence to:

- Kill, injure or take a badger;
- Attempt to kill, injure or take a badger;
- To damage or interfere with a sett.

The 1992 Act defines a badger sett as "any structure or place which displays signs indicating current use by a badger".

Legally Protected Species: Nationally Protected Species – Reptiles

The four widespread[7] species of reptile that are native to Britain, namely common or viviparous lizard (*Lacerta vivipara*), slow worm (*Anguis fragilis*), adder (*Vipera berus*) and grass snake (*Natrix natrix*), are listed in Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and are afforded limited protection under Section 9 of this Act. This makes it an offence, *inter alia*, to:

- Intentionally kill or injure any of these species.

Legally Protected Species: Nationally Protected Species – Water Vole

Water vole is listed on Schedule 5 of the *Wildlife and Countryside Act 1981* (as amended) and is now afforded full protection under Section 9 of this Act. The Act makes it an offence, *inter alia*, to:

- Intentionally or recklessly damage, destroy or obstruct the access to any place that a water vole uses for shelter or protection;
- Intentionally or recklessly disturb a water vole while it is occupying a structure or place that it uses for shelter or protection;
- Intentionally kill, injure or take a water vole.

Legally Protected Species: Nationally Protected Species – Breeding Birds

With certain exceptions[8], all wild birds, their nests and eggs are protected by Section 1 of the *Wildlife and Countryside Act 1981* (as amended). Therefore, it is an offence, *inter alia*, to:

- Intentionally kill, injure or take any wild bird;

[7] The other native species of British reptile (sand lizard and smooth snake) receive a higher level of protection under the *Habitats Regulations* 1994 and (in England and Wales only) the *Wildlife and Countryside Act 1981* (as amended). However, the distribution of these species are restricted to only a very few sites.

[8] Some species, such as game birds, are exempt in certain circumstances.

- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built;
- Intentionally take or destroy the egg of any wild bird.

These offences do not apply to hunting of birds listed in Schedule 2 subject to various controls.

Bird species listed on Schedule 1 of the Act receive further protection, thus for these species it is also an offence to:

- Intentionally or recklessly disturb any bird while it is nest building, or is at a nest containing eggs or young;
- Intentionally or recklessly disturb the dependent young of any such bird.

Legally Protected Species: Nationally Protected Species – White-clawed Crayfish

White clawed crayfish are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). It is an offence to intentionally take white clawed crayfish from the wild. Under this Act, it is an offence to:

- Sell, or attempt to sell, and part of a white clawed crayfish, alive or dead, or advertise that he buys or sells, or intends to buy or sell any part of a white clawed crayfish.

Appendix B
Extended Phase 1 Habitat Survey Target Notes

Target Note Ref (TN).	Target Note Description
1	Earth bunding/mounds. These are located along the road and are ~1m high and ~1m wide. The bunding appears to just be earth but there could be rubble and clinker within it. The mounds are now vegetated within semi-improved grassland. The areas have potential for amphibian and reptile refugia and hibernation.
2	The bare ground is where small earth and rubble piles have been dumped. The areas have potential for amphibian and reptile refugia and hibernation.

Appendix C
Great Crested Newt Survey Results

Waterbody Reference																				
Waterbody Location													Pond 1							
													Wigan							
Survey Number	1			2			3			4			5			6				
Date of torch survey and bottle trap survey	15/05/2013			23/05/2013			29/05/2013			04/06/2013			n/a			n/a				
Surveyors	Caroline Mellor			Caroline Mellor			Caroline Mellor			Caroline Mellor										
Turbidity 0 = clear, 5 = turbid)	1			1			1			1										
Night time air temp. [C]	10			8			14			14										
Vegetation cover (0 = clear, 5 = completely obscured)	80			90			95			95										
Weather	Clear and bright, no rain, calm			Clear and bright, no rain			overcast, no rain, moderate wind			clear, light breeze										
Notes																				
Other amphibians (peak counts)	None			None			1x frog and tadpoles			1x frog and tadpoles										
Number of bottles set	6			6			8			8										
Other survey methods used	Torch and egg search			Torch and egg search			Torch and egg search			Torch and egg search										
Survey method	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others		
GCN male	0	0	0	0	0	0	0	0	0	0	0	0								
GCN female	0		0	0	0	0	0	0	0	0	0	0								
GCN juv	0	0	0	0	0	0	0	0	0	0	0	0								
GCN TOTAL By survey method	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		
GCN eggs	None			None			None			None										
Smooth newt counts	2	2	0	2	3	0	5	10	0	0	6	0								
Palmate newt counts	0	0	0	0	0	0	0	0	0	0	0	0								

Waterbody Reference																				
Waterbody Location													Pond 2a Wigan							
Survey Number	1			2			3			4			5			6				
Date of torch survey and bottle trap survey	15/05/2013			23/05/2013			29/05/2013			04/06/2013			n/a			n/a				
Surveyors	Caroline Mellor			Caroline Mellor			Caroline Mellor			Caroline Mellor										
Turbidity 0 = clear, 5 = turbid)	2			2																
Night time air temp. [C]	10			8																
Vegetation cover (0 = clear, 5 = completely obscured)	40			40																
Weather	Clear and bright, no rain, calm			Clear and bright, no rain																
Notes							Dry - no further surveys													
Other amphibians (peak counts)	100+ fish			100+ fish and tadpoles																
Number of bottles set	8			8																
Other survey methods used	Torching and egg searching			Torching and egg searching																
Survey method	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others		
GCN male	0	0	0																	
GCN female	0	0	0																	
GCN juv	0	0	0																	
GCN TOTAL By survey method	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		
GCN eggs	None			None																
Smooth newt counts	1	0	0	0	4	0														
Palmate newt counts	0	0	0	0	0	0														

Waterbody Reference																				
Waterbody Location											Pond 2b									
											Wigan									
Survey Number	1			2			3			4			5			6				
Date of torch survey and bottle trap survey	15/05/2013			23/05/2013			29/05/2013			04/06/2013			n/a			n/a				
Surveyors	Caroline Mellor			Caroline Mellor			Caroline Mellor			Caroline Mellor										
Turbidity 0 = clear, 5 = turbid)	2			2			2			2										
Night time air temp. [C]	10			8			14			14										
Vegetation cover (0 = clear, 5 = completely obscured)	50			50			60			60										
Weather	Clear and bright, no rain, calm			Clear and bright, no rain			overcast, no rain, moderate wind			clear, light breeze										
Notes																				
Other amphibians (peak counts)																				
Number of bottles set	10			10			10			10										
Other survey methods used	Torch and egg search			Torch and egg search			Torch and egg search			Torch and egg search										
Survey method	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others		
GCN male	0	0	0	0	0	0	0	0	0	0	0	0								
GCN female	0	0	0	0	0	0	0	0	0	0	0	0								
GCN juv	0	0	0	0	0	0	0	0	0	0	0	0								
GCN TOTAL By survey method	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		
GCN eggs	None			None			None			None										
Smooth newt counts	0	1	0	0	0	0	0	3	0	3	1	0								
Palmate newt counts	0	0	0	0	0	0	0	0	0	0	0	0								

Waterbody Reference																				
Waterbody Location													Pond 3 Wigan							
Survey Number	1			2			3			4			5			6				
Date of torch survey and bottle trap survey	15/05/2013			23/05/2013			29/05/2013			04/06/2013			n/a			n/a				
Surveyors	Caroline Mellor			Caroline Mellor			Caroline Mellor			Caroline Mellor										
Turbidity 0 = clear, 5 = turbid)	1			1			1													
Night time air temp. [C]	10			8			14													
Vegetation cover (0 = clear, 5 = completely ot	50			50			10													
Weather	Clear and bright, no rain, calm			Clear and bright, no rain			overcast, no rain, moderate wind													
Notes	Dead water shrew found in bottle traps - not using bottle traps any more									Dry - no further surveys										
Other amphibians (peak counts)																				
Number of bottles set	10			0			0													
Other survey methods used	Torch and egg search			Torch, egg search and net			Torch, egg search and net													
Survey method	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others
GCN male					n/a			n/a												
GCN female					n/a			n/a												
GCN juv					n/a			n/a												
GCN TOTAL By survey method	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
GCN eggs		None			None			none												
Smooth newt counts	0	0	0	0	n/a	0	10	n/a	4											
Palmate newt counts	0	0	0	0	n/a	0	0	n/a	0											

Waterbody Reference																				
Waterbody Location													Pond 4							
													Wigan							
Survey Number	1			2			3			4			5			6				
Date of torch survey and bottle trap survey	15/05/2013			23/05/2013			29/05/2013			04/06/2013			n/a			n/a				
Surveyors	Caroline Mellor			Caroline Mellor			Caroline Mellor			Caroline Mellor										
Turbidity 0 = clear, 5 = turbid)	1			1			1			1										
Night time air temp. [C]	10			8			14			14										
Vegetation cover (0 = clear, 5 = completely obscured)	20			20			80			80										
Weather	Clear and bright, no rain, calm			Clear and bright, no rain			overcast, no rain, moderate wind			clear, light breeze										
Notes	Too shallow to bottle trap																			
Other amphibians (peak counts)										3x frog										
Number of bottles set	0			0			0			0										
Other survey methods used	Torch, net and egg search			Torch, net and egg search			Torch, net and egg search			Torch, net and egg search										
Survey method	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others	Torch	Bottle	Others		
GCN male	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a									
GCN female	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a									
GCN juv	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a									
GCN TOTAL By survey method	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**		
GCN eggs	None			None			None			None										
Smooth newt counts	9	n/a	0	12	n/a	0	0	n/a	0	18	n/a	0								
Palmate newt counts	0	n/a	0	0	n/a	0	0	n/a	0	0	n/a	0								