

3.0 UPDATED ENVIRONMENTAL STATEMENT 2015

3.1 The Approach to the Updated Environmental Statement

The approach adopted in preparing the Environmental Statement(s) (ES(s)) that accompanied the original planning application was outlined within Chapter 2 of the integrated waste management facility's (IWMF's) "Planning Application and Environmental Statement – Volume 2 Environmental Statement". The methodologies applied to the various assessment(s) for each environmental topic were addressed in more depth in the Technical Chapters (Chapters 5-14) in Volume 2 of the planning application documents. A Regulation 19 Additional Information report was issued in December 2008 and an Addendum ES issued in 2009, prior to the Public Inquiry.

Taking account of advances in waste treatment and the best available technologies at the time of the original planning application, a range of technologies were considered to establish the most reasonable worst case emissions, flows and impacts most likely to arise from the development and operation of the IWMF. This was deliberately intended to present a realistic and robust assessment of the proposed IWMF, which would allow Gent Fairhead & Co Limited (GFC) the opportunity to select the most practicable technology to treat and process wastes.

Since gaining planning permission in March 2010, GFC has been continuously employed in the development process entailing the selection of business partners, best technologies, suppliers and off-takers. At the request of the Planning Authority, this process was explained in detail in a paper submitted with the extension of time application (and hence not copied herein) as "Business Development since obtaining planning permission - dated August 2014" and associated graphic "Timeline" by Ralph Keeble, a director of GFC.

As a result of the 5 to 6 years spent in the detailed design and procurement of the IWMF over the past five years, the technologies that are now being considered are the latest and best available and designed and selected to fit within the environmental boundaries and limitations of the 'most reasonable worst case' assessments originally made in the Planning Application and Environmental Assessment. Similarly, advances in construction techniques have meant that the scope and approach of the civil engineering works (particularly with regard to the earth retention proposals around the perimeter of the IWMF) have been modified in line with construction best practice.

To complete the detailed design ready for submission to the planning authority, appropriate environmental updates were commissioned during 2014 and 2015. These were utilised and included within the July 2015 Section 73 application and submission of details.

The intention of this Addendum ES is to review all previous (and updated) environmental baseline information, add more detail about cumulative impacts associated with known "foreseeable developments", and collate everything into one document.

The EIA Regulations are concerned with the presentation of information on '*significant environmental effects*'. Guidance on the content of an ES is contained in EC Directive 97/11 which states *inter alia* that an ES is required to address "*the aspects of the environment likely to be significantly affected by the proposed project, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between the above factors.*"

These aspects were originally considered within the various Chapters 5 to 15 of the original EIA based on the site-specific environmental setting. For ease of reference for all parties, the same topics are discussed herein with exactly the same chapter numbers and titles, namely as follows:

- Chapter 5 – Land Use and Contaminated Land;

- Chapter 6 – Water Resources;
- Chapter 7 – Ecological Impact & Risk Assessment;
- Chapter 8 – Landscape and Visual Impact Assessment;
- Chapter 9 – Cultural Heritage;
- Chapter 10 – Travel and Transport;
- Chapter 11 – Air Quality;
- Chapter 12 – Noise and Vibration;
- Chapter 13 – Social and Community Issues;
- Chapter 14 – Nuisances; and
- Chapter 15 – Human Health Risk Assessment.

The Environmental Impact Assessment (EIA) Directive of 1985 has been amended three times: in 1997, 2003 and 2009:

Directive 97/11/EC brought the Directive in line with the UN ECE Espoo Convention on EIA in a Transboundary Context. The Directive of 1997 widened the scope of the EIA Directive by increasing the types of projects covered, and the number of projects requiring mandatory EIA (Annex I). It also provided for new screening arrangements, including new screening criteria (at Annex III) for Annex II projects, and established minimum information requirements.

Directive 2003/35/EC was seeking to align the provisions on public participation with the Aarhus Convention on public participation in decision-making and access to justice in environmental matters.

Directive 2009/31/EC amended the Annexes I and II of the EIA Directive, by adding projects related to the transport, capture and storage of carbon dioxide (CO₂).

The initial Directive of 1985 and its three amendments have been codified by Directive 2011/92/EU of 13 December 2011. Directive 2011/92/EU has been amended in 2014 by Directive 2014/52/EU.

Essentially, the minor changes that have been made to the EIA procedure(s) have no material effect on the approach, findings and presentation of the overall impacts and associated mitigation measures considered within the IWMF's EIA.

Therefore, the approach to this updated Addendum Environmental Assessment 2015, is that of reviewing the original assessments to validate the findings and mitigation proposals, and where necessary offer updated assessments to reassess the modifications and changes that are proposed to the project.

In addition, as changed by the passage of time since the original application and the extension of time appeal, the Addendum ES presents an updated review of the cumulative impacts of all known foreseeable developments in the area surrounding the IWMF site.

3.2 The Current Scheme Proposals – Section 73 Modifications July 2015

A detailed overview and summary of the changes that are currently proposed to the IWMF under the Section 73 application were presented in the "Statement in Support of Section 73 Application" by Ralph Keeble, which is included in full within this Addendum ES as Appendix A1.

Essentially, the changes that have been made to the IWMF fit within the envelope of the original environmental assessments. A comparison of the permitted IWMF and the proposed revisions under the Section 73 application were presented on Drawings PL-1 and PI-2 as part

of the document "EIA Update July 2015" by Honace and this is copied and included herein within Appendix A2. The footprint of the proposed IWMF waste recycling, recovery and treatment operations varies slightly from that previously permitted, i.e. it has been reduced to 5.34 ha from 6.63 ha.

The revisions that have been made to the IWMF's design have considered the existing environmental conditions, and wherever possible they have sought to reduce the environmental impacts associated with its delivery. Therefore, the revised IWMF design provides an equal or improved environmental performance than that originally (and currently) approved.

The main changes that have been made to the design can be summarised as follows:

- A combination of excavated and soil nailed walls replace the originally proposed vertical concrete retaining walls to deliver the IWMF within the footprint of an existing quarry;
- The footprint of the IWMF building has been reduced as a result of the change in retaining wall design, which offers the opportunity for improvements to the overall landscape and ecological mitigation proposals;
- Ground formation levels at the front of the building have been modified following the excavation of the sand and gravel as part of the ongoing quarrying operations;
- Improvements have been made to the access road alignment where it enters the IWMF area, near the Upper Lagoon which has had a modified footprint; and
- Adjustments in the location and general arrangement of the integrated waste treatment, recovery and recycling processes within the IWMF building(s) including the bottom ash hall, the stack location (slight adjustment), the ACCs and the WWTP.

The biggest difference between the revised footprint presented within the Section 73 application and that of the original IWMF is the overall reduction and modifications that have been made to the main IWMF hangars, i.e. the length and width of the buildings have been reduced to accommodate changes in process layout and revisions to the civil engineering earth retention techniques around the perimeter of the IWMF.

3.3 The IWMF Description of Development

It is important to note that the proposed Section 73 modifications do not seek to change the planning description of the IWMF, nor any of the key environmental or process limitations set within the original planning permission conditions. The Section 73 proposals will deliver a state of the art integrated waste management facility exactly as the original description of the currently permitted development as follows:

An Integrated Waste Management Facility comprising: Anaerobic Digestion Plant treating mixed organic waste, producing biogas converted to electricity through biogas generators; Materials Recovery Facility for mixed dry recyclable waste to recover materials e.g. paper, plastic, metals; Mechanical Biological Treatment facility for the treatment of residual municipal and residual commercial and industrial wastes to produce a solid recovered fuel; De-Inking and Pulping Paper Recycling Facility to reclaim paper; Combined Heat and Power Plant (CHP) utilising solid recovered fuel to produce electricity, heat and steam; extraction of minerals to enable buildings to be partially sunken below ground level within the resulting void; visitor/education centre; extension to existing access road; provision of offices and vehicle parking; and associated engineering works and storage tanks, at Rivenhall Airfield, Coggeshall Road (A120) Braintree.

Some of the key operational parameters that relate to environmental issues to be addressed are the proposed volume or tonnage of waste inputs and the associated traffic. There are no proposals that seek to change Condition 29 that limits the total waste inputs to a maximum of 853,000 tonnes per annum of municipal solid waste and commercial and industrial waste. Similarly, there are no proposals that seek to change Condition 3 that limits the daily number of HGVs arriving at the site to a maximum of 404 (ie 202 in and 202 out) during typical operational weekdays.

A summary of the IWMF's integrated operations outlining: the nominal and maximum design capacities of each process; an overview of the various waste recycling, recovery and treatment processes; the integrated waste water management system; and, the electricity and steam usage is presented within Appendix A of the EIA Update submitted by Honace with the Section 73 application and repeated in full within this report as Appendix A2 "S2 – EIA Update July 2015".

3.4 Updates to the Environmental Baseline

To illustrate the various mineral extraction areas discussed in this Addendum ES, a copy of a plan by Essex County Council in its Minerals Development Document: Preferred Approach Paper (July 2010) is reproduced herein immediately following this Chapter as Appendix 3A. The "Existing Site" at that time shown cross-hatched on the plan, immediately to the north of Site A2, was "Site R". The additional potential areas of "Bradwell Quarry – Rivenhall Airfield", namely sites A2 to A7, are clearly shown on this plan. The IWMF site is entirely within the south-east corner of Site A2.

The original Environmental Assessment for the IWMF was carried out during 2008 but has been reviewed and updated on a number of occasions since then. The environmental update information that has been reviewed during the current process is contained within the following documentation:-

- December 2008 - Regulation 19 Additional Information report by Golder Associates (UK) Limited;
- September 2009 – Addendum ES by Golder Associates (UK) Limited for the Public Inquiry;
- October 2009 - Public Inquiry evidence and further formation September 2009 – various;
- June 2011 - Planning application by Blackwater Aggregates for mineral Site A2 – Ref No ESS/32/11 dated 22 June 2011 (approved 9 February 2012);
- July 2011 - Discharge of IWMF Planning Conditions 53 and 54 related to updated Ecology report and associated Habitat Management Plan by Golder; discharged by Essex County Council;
- 4 August 2014 – Updated ES Review and reliance statement by Golder Associates (UK) Limited for the extension of time planning application; Ref No ESS/41/14/BTE (approved December 2014);
- 8 October 2014 – Further ecological information by Golder Associates (UK) Limited in response to ECC Consultation on the extension of time application;
- Planning application by Blackwater Aggregates for mineral Sites A3 & A4 – Ref No ESS/24/14 dated August 2014 (approved 26 March 2015);
- July 2015 – Updated ES Review by Honace with supporting reports from consultants (the ecological report replicating and updating the October 2014 Golder Associates (UK) Limited package);
- Section 73 and submission of details Ref No ESS/34/15/BTE; and

- December 2015 – Updated ES and CIA Review by Honace with supporting reports from consultants within this Addendum ES compilation.

In all cases, the individual consultants have completed their studies and reports on the basis of the following process:

- Review all previous ESs and appropriate information;
- Review appropriate EIA legislation and update;
- Review project construction and operation proposals to establish any changes;
- Make site visits to understand latest situation on site;
- Review environmental baseline and reset as appropriate;
- Reconsider previous conclusions and mitigation measures; and
- Review and update ES.

The recent modifications that are proposed to the IWMF under the Section 73 application are presented and explained within the “Statement in Support of Section 73 Application” by Ralph Keeble, a director of GFC, which is included in full with this Addendum ES as Appendix A1.

The site boundary and planning application area remain unchanged from that originally assessed and approved. Essentially the changes that have been made to the IWMF fit within the envelope of the original environmental assessment(s).

The revisions that have been made to the IWMF’s design have considered the existing environmental conditions, and wherever possible they have sought to reduce the environmental impacts associated with its delivery. Therefore, the revised IWMF design provides an equal or improved environmental performance compared with that originally (and currently) approved.

3.5 Updates to Cumulative Impact Assessment - Process

As explained in the PINS Regulation 22 letter dated 13 November 2015 (to GFC’s planning agent Holmes & Hills LLP of Braintree) a Cumulative Impact Assessment (CIA) should identify any likely significant effects occurring as a result of the proposed development (the IWMF) with “other reasonably foreseeable developments”. Based upon the information that had been submitted to the Inspectorate with the extension of time appeal documentation, it appears that such a CIA was deemed not to be included. To bring this now up to date would require stated consideration of any foreseeable development of which GFC is aware.

To explain why such a CIA appears not to have been undertaken it should be noted that GFC has been instrumental in a series of other planning applications on and around the IWMF site, particularly in relation to those made by its associate company Blackwater Aggregates (owned 50% by GFC and 50% by Cemex). During the emerging local Minerals Development Plan (MDP) process, (since adopted 2014), the County Council ensured that all future applications for extraction within the Bradwell Quarry (also encompassing the former Rivenhall Airfield and the IWMF site) would take note of the following:

‘Careful consideration must be given to the final low-level restoration contours to ensure the final landform blends with the surrounding topography and could blend with the levels and planting of the strategic waste management development (Ref ESS/37/08/BTE) if implemented.’

As a result of this requirement, planning applications for MDP mineral extraction areas Site A2 (Ref No ESS/32/11 submitted in June 2011) and Sites A3 and A4 (Ref No ESS/24/14 submitted in August 2014 and approved in March 2015) included EIAs, undertaken and issued several

years after the IWMF planning permission, which fully considered the quarrying extraction and restoration operations alongside the IWMF (if implemented).

The Blackwater Aggregates mineral extraction applications, that included CIAs within the ESs, were mostly prepared by the same consultants that GFC had employed for the IWMF. Similarly, all documentation was submitted to the same department within the Planning Authority, Essex County Council. Essentially, a continuing process of updating and submitting the site's environmental baseline and CIA has been undertaken on several occasions since the IWMF planning permission in March 2010.

In addition to the on-going mineral extraction and restoration operations, the planning and design of other "foreseeable" projects relating to the development of the IWMF have progressed since 2009, most notably in relation to the potential underground services connections that are expected to be provided by the statutory undertakers for electricity and water. Full details of these proposals are contained herein within the following Chapter 4. As the Planning Inspectorate has specifically asked for reassurance that the CIA has properly considered these potential developments, GFC has instructed Honace and the environmental team to review all latest proposals and collate the conclusions into this Addendum ES.

GFC has recently commissioned its team to review and update the CIA by the following:

- Review all past ESs, CIAs and additional further information for both IWMF and Bradwell Quarry as listed above in Section 3.4;
- Consider the potential underground works and routes for the IWMF electricity cables and water abstraction and discharge pipelines; (reports enclosed herein);
- Review future mineral extraction operations within the 'preferred' and 'reserve' sites for mineral extraction adjacent to or affecting the IWMF, including temporary stockpiling and water lagoon works that may be required if the Blackwater Aggregates' quarrying and restoration operations are modified in order to further integrate the IWMF into the local landscape (if implemented);
- Review local development sites that have been put forward by landowners or their agents into the emerging Braintree District Council's Land Development Framework process; and
- Reconsider CIAs on the basis that all foreseeable development(s) come forward (at some future point in time) and offer an assessment in each individual assessment chapter.

3.6 Environmental Permit EPR/KP3035RY/A001 'Duly Made'

On 24 September 2015 an Environmental Permit application was submitted to the Environment Agency on GFC's behalf by Fichtner Consulting Engineers Limited. The application is consistent with the IWMF's proposed integrated waste recovery, recycling and treatment operations.

The Environment Agency confirmed in its letter dated 9 December 2015 (contained within this Addendum ES immediately following this section as Appendix 3B) that the Environmental Permit Application Reference No: EPR/KP3035RY/A001 had been 'duly made' on 17 November 2015.

The final and agreed details of the Environmental Permit will demonstrate that the IWMF embodies Best Available Techniques (BAT) to prevent, and where this is not practicable, to reduce emissions and the impact on the environment as a whole to acceptable standards. The Environmental Permit application includes a detailed review of the Site proposals against the EA Guidance on BAT for the Sector and an Operational risk appraisal in accordance with the recently published (April 2014) guidance.

CHAPTER 3 UPDATED ENVIRONMENTAL STATEMENT 2015 IWMF ADDENDUM ENVIRONMENTAL STATEMENT

Whilst a full copy of the Environmental Permit Application is not submitted with this Regulation 22 Report, it contained the updated Section 73 information S7.1 Assessment of Significance of Air Quality Effects and S7.2 Dispersion Modelling Assessment (Appendix A7.1 and A7.2), together with an Abnormal Emissions Assessment and Greenhouse Gas Assessment.

The maximum height of the IWMF stack that is modelled within the Environmental Permit Application is 85 m Above Ordnance Datum.