

# CHAPTER 5

## LAND USE AND CONTAMINATED LAND

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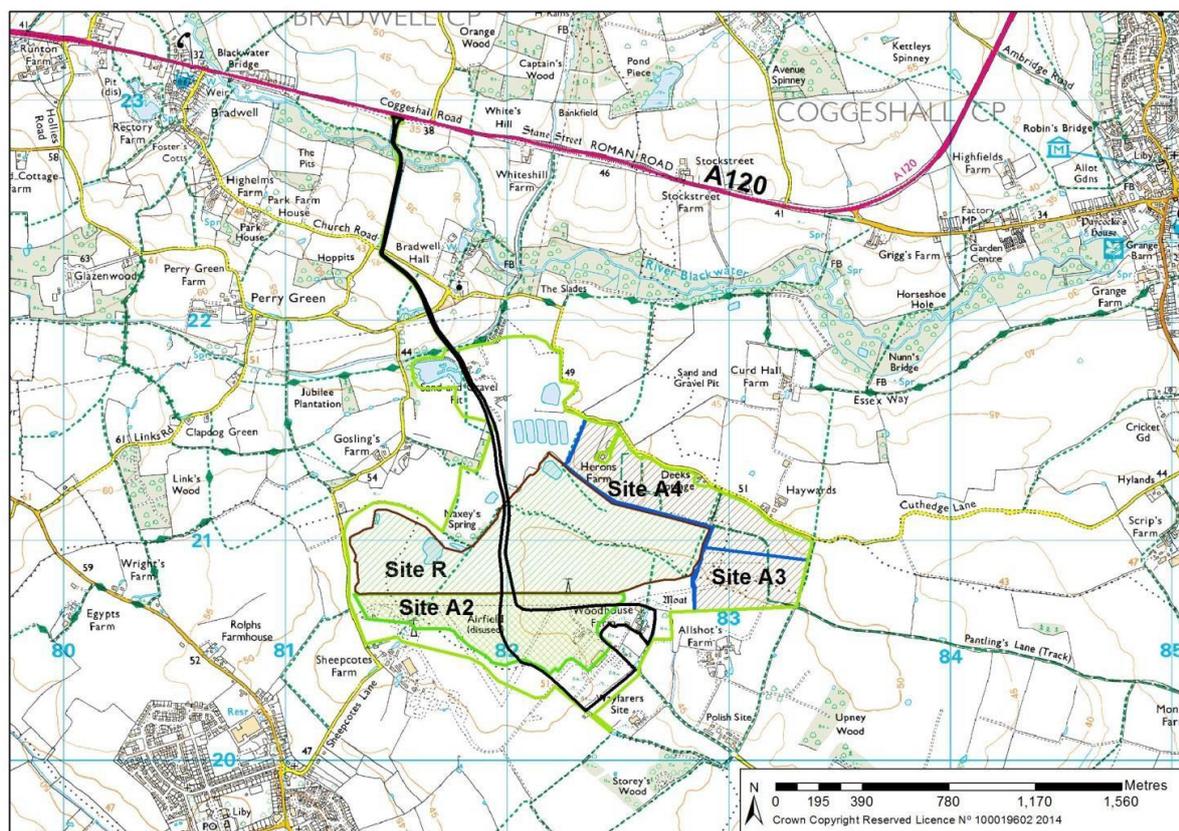
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## 5.0 CHAPTER 5 LAND USE AND CONTAMINATED LAND

The site boundary and planning application area remain unchanged from that originally assessed and approved. Whilst quarrying operations have resulted in a change to the overall site setting, i.e. original ground levels have been changed across the footprint of the integrated waste management facility (IWMF), the impact of the proposals on Grade 3a agricultural land remains unchanged and unaltered. The quarrying operations carried out across the Site neither found nor identified any contaminated land associated with the removal of the existing runways and Hangar. More recently, the implementation of the IWMF development works (ESS/34/15/BTE), and in particular the virgin topsoil and subsoil stripping and removal of former airfield concrete roadways and foundations, has ultimately confirmed that the site is uncontaminated.

### 5.1 Changes to the Site Setting Associated with Quarrying Operations

The IWMF site lies within the permitted areas of the Bradwell Quarry where current sand and gravel extraction with low level restoration to agriculture/biodiversity/water and woodland is anticipated to be completed by 2021; however, further 'preferred' and 'reserved' sites are allocated in the adopted 2014 Minerals Local Plan that would extend the life of the quarry, subject to detailed submission and approval to Essex County Council.



Base Plan extracted from ECC Committee Report DR/07/15

The above location plan indicates the extent of previous and current mineral extraction areas: Site R permitted in 2001, Site A2 permitted in 2011 which included extraction in part of the site for the IWMF; and, Site A3 and A4 permitted in 2014. The most recent mineral planning application area for Site A3 and A4, indicated by the green boundary on the plan above, encompassed all previous extraction areas, namely Site R, Site A2, the IWMF site and the minerals processing area to the north.

Whilst the development of Site A2 has resulted in a localised change in ground levels in and around the vicinity of the IWMF site, in line with the Site Specific Issues to be Addressed – at that time set out within Essex County Council's emerging Replacement Minerals Local Plan, it was noted that:

*'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.'*

In developing the Environmental Impact Assessment for Site A2, consideration was given to the baseline conditions established by the permissions already obtained for the existing operations at Bradwell Quarry and, where relevant, other planning permissions (namely the IWMF) to minimise and mitigate impacts from Site A2 equal to or less than the conditions benchmarked and approved by the Planning Authority. Cumulative impacts associated with the development of Site A2 considered potential impacts likely to arise from the IWMF.

Similarly, the Environmental Impact Assessment submitted with the Site A3 and A4 took into account the requirements of the then emerging Replacement Minerals Local Plan (subsequently adopted July 2014) and considered the cumulative impacts associated with its development against Site A2 and the IWMF planning permission.

On the 7 October 2016, Blackwater Aggregates received planning permission (ESS/07/16/BTE) for a variation of conditions to Sites A3 and A4 to modify the restoration scheme for Bradwell Quarry which permits the integrated use of materials excavated from the footprint of the IWMF site within the overall restoration of the adjacent quarry.

The materials excavated from the IWMF site can be relocated and stockpiled across New Field in a planned and systematic manner over a 6 to 8 month period. As the stockpile is created, to maintain continuity of the existing quarrying operations, particularly the provision of a sustainable water supply to the screening and washing plant, a temporary lagoon will be created known as 'Sheepcotes Lagoon'. The subsequent excavation of the stockpile and use of the materials within the overall restoration scheme will be integrated into the final site restoration scheme over a period of 3 to 5 years.

The cumulative impact associated with the above was fully considered within the Updated Environmental Statement 2015.

## **5.2 IWMF Site Ownership and Planning Allocation**

The joint Essex County Council and Southend-on-Sea Borough Council Waste Local Plan, adopted in 2001, is the current approved planning policy document that guides waste development and determines waste-related planning applications within Essex and Southend.

Following the introduction of the Planning and Compulsory Purchase Act 2004, Essex County Council is obliged to update its Local Plans. As work on the Replacement Waste Local Plan progresses, the content of the 2001 Waste Local Plan has been saved until the new plan is adopted.

Gent Fairhead & Co Limited is the landowner of Rivenhall Airfield including the site known as Preferred Site WM1 in the 2001 Waste Local Plan.

On 10 June 2016 Essex and Southend-on-Sea Councils submitted their Replacement Waste Local Plan (RWLP) to the Secretary of State for independent examination. Public hearings into the Essex and Southend-on-Sea Replacement Waste Local Plan adjourned on 7 October 2016 and the two councils have made a request to the Inspector to make several modifications to the Plan which would make it suitable for adoption.

The Schedule of Modifications, the Addendum to the Site Assessment & Methodology Report and the Addendum to the Sustainability Appraisal were the subject of a six-week consultation from 5 January to 16 February 2017. The Inspector has issued her Examination Report which was agreed by Cabinet on 20 June 2017. Given the timing of full Council meetings of the two Authorities, a decision regarding adoption of the Waste Local Plan should occur by Autumn 2017.

The Rivenhall IWMF is allocated as a "Strategic Site" in the emerging RWLP.

Following the modifications, the Rivenhall IWMF will be the only named Strategic Site under Policy 3.1 "For residual non-hazardous waste management" at the only energy-from-waste CHP facility named in the Plan, with a capacity of 595,000 tonnes per annum. In Appendix 1 of the RWLP Schedule of Modifications January 2017 "The Waste Challenge at a Glance" there is an update with regard to the County Council's own management of municipal waste in Essex which reads:

*"At present, the Waste Disposal Authority is considering the long-term management options for the stabilized residual waste output of the Tovi Eco Park Facility. In 2016, the annual 200,000 tonnes output from this facility was exported from the Plan area. In line with the Plan's Strategy for the Plan area to become self-sufficient with regard to its waste management needs where practicable, the Plan includes a site allocation which has capacity to potentially manage this residual waste in the Plan area in the longer term."*

Rivenhall IWMF is the only site in the Plan with this capability and capacity and this highlights how critical the implemented IWMF will be in helping Essex to ensure that it meets its objective of self-sufficiency in the County.

### **5.3 Updated Land Use Baseline 2017**

Across the footprint of the IWMF, quarrying and restoration operations within Site A2 resulted in the loss of the former airfield runway(s), an aircraft Hangar, airfield buildings, and agricultural fields that were originally present at the site.

Following the implementation of the IWMF planning permission (ESS/34/15/BTE) early "enabling works" have been undertaken within the IWMF building foot-print area; namely the removal of the remaining areas of woodland, removal of remnants of the former airfield roadways and building foundations, and the stripping and stockpiling of topsoil and sub-soil. Topsoil and subsoil have been stockpiled across Wayfarers Field for future use within the restoration of the IWMF site.

Areas of Open Habitat have been established adjacent to Woodhouse Farm and a hedgerow relocated to Wayfarers Field.

Whilst no contaminated land has been encountered during the quarrying operations that have been carried out across Site R, Site A2 and Sites A3 and A4, during the removal of remnants of former airfield buildings within the IWMF construction site area (brick built foundations and concrete bases within the former TPO woodland), an isolated pile of broken asbestos sheeting (bonded roof tiles and wall panels) from the former airfield buildings was found. In accordance with Condition 25, a method statement and risk assessment was prepared and approved by the Waste Planning Authority to allow the materials to be handpicked, collected and removed from site for disposal by an accredited company. This work was completed during January 2017

Following the early enabling works as described above, the potential risk of encountering historic site contamination within the IWMF site is negligible. Future excavation operations will either result in the removal of virgin ground (i.e. Boulder Clay overburden, sands and gravels

and inter burden, and London Clay) or indigenous site materials (clean quarry backfill comprising previously excavated Boulder Clay overburden).

There are no sites in the area that are known to be designated for their geological importance. There are also no statutory land designations such as Ramsar sites, Special Protected Areas, Site of Special Scientific Interest, National or Local Nature Reserve, or National Parks.

The Site lies within a Nitrate Vulnerable Zone (NVZ) in accordance with the EC Nitrates Directive in order to reduce nitrogen loss from agriculture to water. Farmers within NVZs are required to comply with measures in the Nitrates Action Programme.

There are no recorded landfills within 1 km of the Site. The nearest closed historic landfill recorded on the Environment Agency's web pages is at Temple Lane, which is approximately 2 km to the southwest of the Site at Silver End.

A Statement on Contaminated Land and the supportive results of previous environmental testing were submitted and approved as details under Condition 25 of the planning permission ESS/34/15/BTE.

#### **5.4 Updated Land Use Impacts 2017**

There will be no overall change in the land use impacts arising from the development of the IWMF site from those originally assessed in 2008.

Following the early enabling works described above, the potential risk of encountering historic site contamination within the IWMF site is negligible.

In the extremely unlikely event that a potential source of historic contamination is identified during excavation works, the civil engineering construction contractor will immediately notify GFC who will make arrangements to determine what steps can be taken to isolate the source of contamination pending further investigation and make the necessary arrangements to mitigate any possible delay to the works. Works within 10 metres of a potential source of contamination will cease and the contractor will move to another area of the Site until such time as the contamination has been removed.

GFC's assessment of suspected contamination may include but not be limited to, the testing and characterisation, excavation and temporary storage of the materials into a quarantine area and disposal. Any suspected contamination will be appropriately assessed, primarily through sampling and laboratory analysis, and any requirement for remedial works will be identified.

Potential impacts associated with the IWMF's development on agricultural land no longer apply across the site itself – quarrying operations across Site A2 and the implementation of the IWMF planning permission have resulted in the loss of any pockets of agricultural land that were originally present within the IWMF footprint.

Apart from the on-going quarrying, restoration and agricultural activities within and around the IWMF site, there have been no significant changes to land uses on and around the site. There have been no relevant planning permissions or new facilities built that would change the findings of the original assessment of land use impacts.

#### **5.5 Cumulative Land Use Impacts**

There will be no overall change in the land use impacts arising from the development of the IWMF site. Cumulative impacts associated with the development of the IWMF alongside the former Site A2 and existing Site A3 and A4 quarrying operations were considered by the 'Site

Specific Issues to be Addressed' set out within Essex County Council's emerging Replacement Minerals Local Plan and adopted 2014 Minerals Local Plan, namely:

*'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.'*

Similarly the future extension of quarrying operations across Bradwell Quarry into Site A5 (as a 'preferred' site) and Site's A6 and A7 (as 'reserve' sites) must provide a landform and site setting that blends into the surrounding topography and landscape mitigation proposals around the IWMF.

The temporary stockpiling of overburden materials from within the footprint of the IWMF across New Field will provide materials that can be used to restore other areas of Bradwell Quarry.

The integrated use and retention of the overburden and restoration soils within Bradwell Quarry requires the temporary stockpiling of the materials across New Field and the creation of a temporary lagoon within the footprint of the existing Site A2 quarry. On a short term basis, the creation of the 'New Field Stockpile' and the formation of the temporary 'Sheepcotes Lagoon' will be integrated within the overall restoration scheme. The stockpile and temporary lagoon are located within areas of the existing quarry that are awaiting or undergoing restoration, i.e. located on bare ground. The subsequent use of the stockpiled materials within the quarry restoration scheme will result in agricultural after uses and a patchwork of biodiverse enhancement proposals within the landscape, and support in the delivery of biodiverse Habitats of Principal Importance within the wider site.

In considering the potential Land Use Impacts associated with the installation of the proposed electricity cable and water abstraction and discharge pipelines, the methods of working will be managed and controlled to mitigate impacts on agricultural or highway assets. Particular attention will be paid to the preservation of agricultural land drainage systems. Land drainage in each field will be carefully inspected and recorded. All drains severed by the trenching operations will be identified and an appropriate method of reinstatement discussed and agreed with the landowner. Furthermore, standard subsoil and topsoil management will apply to mitigate any impact on the field margins.

The electricity cable and water pipelines will be routed within the verge of the IWMF site access road, across areas of restored quarry workings, within the public highway or along agricultural field boundaries. The land use impact associated with these works on agricultural or highway assets will be Low and short term in nature.

It is concluded that from a land use assessment perspective the EIA for the IWMF proposal and wider foreseeable developments in and around the site have been considered and assessed, and no significantly negative additional impacts have been identified.

In extending the height of the IWMF stack by 23 m, no contaminated land will be encountered.