



**AN APPLICATION TO VARY ENVIRONMENTAL
PERMIT NUMBER EPR/CB3738AC FOR THE DEPOSIT
OF WASTE ON LAND AS A RECOVERY ACTIVITY TO
DEVELOP THE HARESHILL FARM SITE FOR HIGHWAY
AND EMPLOYMENT USE AS PART OF THE WIDER
SOUTH HEYWOOD DEVELOPMENT, ROCHDALE**

**ENVIRONMENTAL SETTING AND SITE DESIGN
REPORT (ESSD)**

Report reference: PCE/HA/AKM/5640/01/ESSD
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Although recently withdrawn, the Environment Agency Template: Conceptual Site Model, Environmental Setting and Site Design Report. Version 1 dated 14 October 2016 (the ESSD Template) provides a suggested list of tables and drawings to illustrate the conceptual site model and environmental setting and states that “*You can use other formats as long as you present all of the required information*”. The tables and drawings listed above have been prepared with reference to the relevant features included in the ESSD Template.

APPENDICES

- Appendix ESSD A A copy of Planning Permission reference 16/01399/HYBR
- Appendix ESSD B Drawing SP(90)38 Showing the Boundary of Planning Permission Reference 16/01399/HYBR
- Appendix ESSD C Illustrative Masterplan of the Development
- Appendix ESSD D The engineering details of the north western and north eastern slopes
- Appendix ESSD E A summary of the ground conditions at Hareshill Site, Heywood the subject of Environmental Permint Number EPR/CB3738AC
- Appendix ESSD F A report of the site investigation carried out in november 2020 at the Hareshill Farm site, Hareshill Road, Heywood
- Appendix ESSD G 1883PCA- Factual Report, Hareshill Road, Heywood, South Rochdale

This report has been prepared by MJCA with all reasonable skill, care and diligence, and taking account of the Services and the Terms agreed between MJCA and the Client. This report is confidential to the client and MJCA accepts no responsibility whatsoever to third parties to whom this report, or any part thereof, is made known, unless formally agreed by MJCA beforehand. Any such party relies upon the report at their own risk.

1. Introduction

Report context

- 1.1** MJCA is commissioned by P Casey Enviro Limited (PCE) to prepare and submit an application to vary Environmental Permit number EPR/CB3738AC (the permit) for the deposit of waste on land as a recovery activity to develop the Hareshill Farm Site for highway and employment use as part of the wider South Heywood development in Rochdale, Lancashire (Figures ESSD 1 and ESSD 2A).
- 1.2** The permit was issued to PCE on 8 March 2012 and provides for the creation of a platform for the construction of an equestrian facility. Prior to the issue of the permit the site was the subject of exemptions from the need for an Environmental Permit which were in place at the time. It is understood that the deposition of waste at the site commenced in 2009 and had substantially ceased by mid-2015.
- 1.3** On 31 March 2020 planning permission reference 16/01399/HYBR (the planning permission) was granted by Rochdale Borough Council for inter alia:-

‘...the development of land at South Heywood...for the construction of a new link road between Junction 19 of the M62 and Pilsworth Road...a major mixed-use development comprising... employment uses...together with associated landscaping...drainage...cycleway and footpath linkages, infrastructure and other works ancillary thereto...’

- 1.4** The extracts from the planning permission referred to above are the main components of the planning permission which are relevant to the site. The planning permission is for a key strategic integrated development known as the Northern Gateway which also provides for a much wider range of mixed-use developments including other road and road junction works, residential development, a primary school, landscaping, open space and sports pitches, drainage, ecological enhancements, infrastructure and other ancillary works. The development the subject of the planning permission which is referred to in the quotation above, and which includes the site, is the first section of the overall development to come forward. The Northern Gateway integrated development site extends through both Bury and Rochdale and is designed to create housing and employment along the M62 corridor to rebalance the economy of Greater Manchester. The land is allocated within the

draft Greater Manchester Spatial Framework and will be the biggest employment site in the region bringing 12 million square feet of employment space, around 10,000 new jobs and up to 3,900 homes.

- 1.5** The specific benefits relating to the development the subject of the planning permission are significant in their own right. Subject to delivery of the new link road which encroaches on the eastern part of the permit area, the project will deliver 1.45 million square feet of new employment space, up to 1,000 new homes, ancillary retail, and community uses including a new primary school, playing fields, parks and open space over an area of 130 hectares. This development the subject of the planning permission has the potential to create more than 2,850 new jobs and generate £175m a year for the local economy. It is therefore a major part of the Local Authority's planned strategy for economic growth in the short to medium term.
- 1.6** A copy of the planning permission is presented at Appendix ESSD A¹ and a drawing showing the boundary of the planning permission is presented at Appendix ESSD B. The illustrative masterplan for the development the subject of the planning permission on which the boundary of the permit is overlain in green is presented at Appendix ESSD C.
- 1.7** To facilitate the construction of the components of the development the subject of the planning permission within the boundary of the site it is necessary to make revisions to the ground levels compared with those the subject of the permit and also to deposit waste materials in the areas of the site to the north west and south east of the area the subject of the permit. The waste which will be deposited in the areas to the north west and south east of the area the subject of the permit will be deposited on waste which was deposited historically under the exemptions from the need for an Environment Permit. Whilst it is necessary to vary the permit to include the areas to the north west and south east it is proposed only to permit the newly deposited waste and not the underlying waste. The proposed permit boundary is shown on Figures ESSD 2B(i) and ESSD 2B(ii). The areas to the north west and south east are referred to as repositories and as shown on Figure ESSD 2B(ii) include 3D Environmental Permit boundaries. The engineering details of the north western and north eastern slopes which correspond to cross sections B-B' and C-C' of Figure ESSD 2B(ii) are

¹ Planning permission reference 16/01399/HYBR is the subject of a non-material amendment reference 20/00454/ANM which was issued by Rochdale Borough Council on 27 July 2020. A copy of the non-material amendment is also presented at Appendix ESSD A

provided at Appendix ESSD D. The design of the restored surface of the site including the north western and north eastern slopes is fundamental to and a function of the development of the site for highway and employment use. The development of the site for highway and employment use comprises a substantial civil engineering development including built development, highways, associated infrastructure and engineering structures. The technical specification of the components of the highway and employment use including matters relating to the stability of the landform including the north western and north eastern slopes on which the development will take place will be the subject of approvals pursuant to the planning, development and highway regulatory control regimes. Accordingly, and given that there will be no waste related engineering infrastructure a Stability Risk Assessment (SRA) is not included in this application.

- 1.8** It is estimated that it will be necessary to deposit approximately 195,600m³ of inert waste materials in the repositories which comprises 168,100m³ in the north west repository and 27,500m³ in the south east repository.
- 1.9** The new link road referred to in the extract from the planning permission above runs along the north eastern and north western boundaries of the site including in the area which is the subject of the permit and in the proposed north west repository. The approximate route of the new link road in the area of the site is shown on Figure ESSD 2A. The previously deposited waste in the footprint of the link road in the area the subject of the permit has been excavated and removed as part of the construction of the new link road. The waste excavation and removal works in the area of the new link road the subject of the permit were carried out pursuant to an Operational Management Plan² which was agreed with the Environment Agency (EA). An application will be submitted shortly to partially surrender the permit for the area of the link road.
- 1.10** It is specified in the introductory note to the permit that up to 306,000 tonnes of waste will be deposited at the site to the levels shown on the approved Waste Recovery Plan³ (2012 WRP) which is referred to as an Operating Technique in Table S1.2 of Schedule 1 to the permit. To make revisions to the ground levels compared with

²Hareshill Waste Recovery Site Permit – EPR/CB3738AC Operational Management Plan for the Excavation and Export off Site of excavated waste material from within the Link Road Area. Final rev2 – 19th March 2021. Approved by the Environment Agency on 22 March 2021

³ Waste Recovery Plan for the Equestrian Centre Hares Hill Farm Heywood, Rochdale. Report Number 06339/1A. May 2012.

those the subject of the permit it is necessary to revise the 2012 WRP. A revised WRP was submitted to the EA on 7 October 2020 and further information in respect of the recovery status of the activity was submitted to the EA on 14 December 2020. In a letter dated 17 December 2020 the EA confirmed that the activity comprises recovery. The proposed ground levels in the revised WRP included not only the area the subject of the permit but also the areas which will comprise the north west and south east repositories. A copy of the revised WRP is presented at Appendix C to the Application Report. A copy of the further information which was submitted to the EA on 14 December 2020 is presented at Appendix D to the Application Report and the letter from the EA dated 17 December 2020 confirming that the activity comprises recovery is presented at Appendix E to the Application Report. Since December 2020 the detailed design of the development the subject of the planning permission has progressed and there have been some changes to the proposed ground levels. By way of example, there will be no access point in the north west corner of the site. As these changes are relatively minor and as the principles on which recovery was justified in the revised WRP which the EA confirmed comprised recovery do not change, the revised WRP has not been updated. The current and proposed ground levels are shown on Figure ESSD 2C and ESSD 4A respectively.

- 1.11** It is acknowledged by PCE that waste has been deposited at the site above the levels the subject of the 2012 WRP and that some of the waste materials deposited at the site are inconsistent with those specified in the 2012 WRP, the permit and those wastes which should have been deposited pursuant to the exemptions from the need for an Environmental Permit. The current ground levels at the site are shown on Figure ESSD 2C. Further information on the waste materials deposited at the site is presented below. Extensive site investigatory works have been carried out at the site and remedial measures have been proposed. The implementation of the remedial measures in the area of the site which is the subject of the permit will be the subject of Action Plans (and subsequent Operational Management Plans) which will be agreed with the EA.
- 1.12** In addition to delivering ground levels pursuant to the development at the site the subject of the planning permission, the remedial measures which will be the subject of the Action Plans will remediate the remaining waste at the site such that it is consistent with the definition of inert specified in Section 2.1.2 of the Annex to the Council Decision of 19 December 2002 establishing criteria and procedures for the

acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC⁴. The remediation of the waste at the site will be the subject of a mobile plant Environmental Permit⁵. It is anticipated that it will not be feasible to remediate all of the waste to the appropriate standard and some waste will be removed from site for management at a suitably authorised facility without being treated under the mobile plant Environmental Permit.

1.13 As explained in Paragraph 1.7 it is necessary to vary the permit to include the north west and south east repositories but it is proposed only to permit the newly deposited waste and not the underlying waste. The proposed permit boundary is shown on Figures ESSD 2B(i) and ESSD 2B(ii). As it is proposed only to permit the newly deposited waste and not the underlying waste the 3D Environmental Permit basal profile of the north west and south east repositories comprises the current ground level. As explained in paragraph 1.10 remediation of the waste materials in the permitted area will be implemented at the site. Remediation of the waste beneath the north west and south east repositories also will be carried out. In the event that the remediation of the waste beneath the north west and south east repositories results in a change to the 3D Environmental Permit basal profile of the north west and south east repositories then revised basal profile will be submitted to the Environment Agency. It is proposed that this issue is the subject of a suitably worded Improvement Condition.

1.14 It is proposed that the materials which will be deposited in the north west and south east repository areas will comprise waste materials excavated from elsewhere on site. The waste materials will be subject to rigorous Waste Deposition Procedures (WDP) to ensure that only inert waste materials are deposited. The waste materials have, in effect, already been accepted at the site although they will be subject, as necessary, to remediation such that they are inert. Accordingly, no changes to the waste codes listed in Schedule 2, Table 2.1 of the permit are proposed. In the unlikely event that it is necessary to import additional waste materials to the repositories or the currently permitted site to facilitate construction of the development platform the

⁴ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32003D0033&from=EN>

⁵ In discussions with Anthony Watts of the Environment Agency it has been confirmed that operations the subject of a mobile plant Environmental Permit can be carried out within the boundary of Environmental Permit Number EPR/CB3738AC as Environmental Permit Number EPR/CB3738AC comprises a Waste Operation and not an Installation.

imported wastes will also comprise inert waste materials only and will be subject to the WDP.

- 1.15** This report comprises the Conceptual Site Model, Environmental Setting and Site Design (ESSD) report to support the application to vary the permit to develop the Hareshill Site by amending the currently permitted ground levels and increasing the permit area to include the north west and south east repositories. The structure of this ESSD report is based on a template produced by the EA “Conceptual Site Model, Environmental Setting and Site Design Report” Version 1 dated October 2016.

Site details

- 1.16** The Hareshill Site is located to the south of the junction of Hareshill Road and Pilsworth Road approximately 1.4km south west of the centre of Heywood. The site is centred approximately on National Grid Reference (NGR) SD 846 092 and covers an area of approximately 38 hectares. The site location is shown on Figure ESSD 1. The site the subject of the permit is located in the central and the majority of the south of the Hareshill Site. The proposed north west and south east repositories are located to the north west and south east of the area the subject of the permit. The site and surrounding area including the area of the permit, the north west and south east repositories and the proposed area of the permit are shown on Figure ESSD 2A. As explained above the north west and south east repositories will include 3D Environmental Permit boundaries which are shown on Figure ESSD 2B(i) and 2B(ii).
- 1.17** Pilsworth Road runs in a generally north east to south west direction adjacent to the north western boundary of the Hareshill Site. Hareshill Road runs in a generally north west to south east direction adjacent to the north eastern boundary of the site. Access to the site is off of Hareshill Road in the southern part of the site. Hareshill Road is being improved currently and will comprise part of the new link road referred to above.
- 1.18** To the east, north east, north and north west of the Hareshill site boundary and beyond Hareshill Road and Pilsworth Road are commercial and employment use areas comprising mainly business and distribution parks. A further commercial and employment use area is located approximately 300m south west of the site. A railway line is located approximately 310m north of the site running east to west separating residential Heywood and Heywood Distribution Park. Hareshill Farm was located

approximately 50m east of the site beyond Hareshill Road although has now been demolished. Stock Nook Farm is located approximately 150 south of the site and Siddal Moor Farm is located approximately 200m south east of the site. The majority of the land to the south east, south, south west and west is in agricultural use currently although the land adjacent to the northern part of the south western site boundary will be developed for employment use and the land to the south east will be developed based generally around a residential use as part of the development the subject of the planning permission. With the exception of the farm dwellings referred to above, currently the nearest residential properties to the site are located approximately 330m to the north, 370m to the north east and 470m to the east beyond a sewage treatment works.

- 1.19** The current ground levels at the site are shown on Figure ESSD 2C. The highest ground level at the site is approximately 132mAOD in the mid-east of the site adjacent to Hareshill Road which falls generally to approximately 118mAOD to 115mAOD along the north western site boundary adjacent to Pilsworth Road, 115mAOD to 120mAOD along the south western boundary and 120mAOD to 124mAOD along the south eastern boundary. In the south west of the site the site is dissected by water and gas mains which run in a generally north west to south east direction. The presence of the gas and water mains has resulted in valley features in the south west of the site as the services were not overfilled. The ground levels in the north east of the site are subject to change currently as a result of the construction of the new link road.
- 1.20** There are 8 public rights of way within 500m of the site comprising six Footpath (FP) routes and two Bridlepath (BP) routes. The public rights of way in the vicinity of the site are shown on Figure ESSD 2A. FP75 runs along the south western boundary of the site from Pilsworth Road to a point adjacent to the southern corner of the site where it joins FP74 which runs from Hareshill Road and FP73a along the south eastern boundary of the site before continuing in a south westerly direction. FP73a runs in a north westerly direction to the north of the former location of Hareshill Farm and joins BP71. FP72 crosses the south eastern part of the site in a generally north east to south west direction from Hareshill Road and BP71 to FP74. FP72 will be extinguished as part of the development the subject of the planning permission. BP71 continues in a north easterly direction along the south eastern boundary of the business park to the north east of Hareshill Road. FP142 runs in a south easterly

direction from FP74 at a point close to the southern corner of the site. There are several other public rights of way in and around the business park to the north east and the former location of Harehill Farm. There will be changes to the rights of way network external to the site as part of the development the subject of the planning permission.

- 1.21** There are no Scheduled Monuments, Registered Parks and Gardens, World Heritage Sites or listed buildings within 500m of the site.
- 1.22** Based on information from the Defra MAGIC website there are no Sites of Special Scientific Interest (SSSI), Special Protection Areas (SPA), Special Areas of Conservation (SACs) or National Nature Reserves (NNRs) or Ramsar sites located within 2km of the site. Hopwood Woods Local Nature Reserve (LNR) is located approximately 1.8km south east of the site and is shown on Figure ESSD 1. It is understood that Hopwood Woods comprises several areas of woodland, including ancient and seminatural woodland and a pond which supports breeding toads. There are no non-statutory designated sites of nature conservation interest located within 500m of the site.

2. Source

Historical development

2.1 As explained in Section 1 the permit was issued to PCE on 8 March 2012 and prior to the issue of the permit the site was the subject of exemptions from the need for an Environmental Permit which were in place at the time. It is understood that the deposition of waste at the site commenced in 2009 and had substantially ceased by mid-2015. It is understood the site had not been developed prior to the deposit of waste and historically the land was farmland.

2.2 Extensive site investigation works have been carried out at the site as a result of the waste types and quantities deposited at the site. A summary of the ground conditions at the site was prepared by MJCA in December 2020. The report of the summary of the ground conditions is presented at Appendix ESSD E. In addition to a summary of the ground conditions the report includes information on the site setting and site history together with information on the geological, hydrogeological and hydrological setting of the site and the results of the extensive monitoring carried out at the site. Two further site investigations have been carried out at the site. An extensive trial pitting exercise was carried out by PCE in November 2020 and a detailed site investigation was carried out by Vertase FLI in January 2021. The report of the trial pitting carried out in November 2020 is presented at Appendix ESSD F and the factual report of the January 2021 site investigation is presented at Appendix ESSD G.

Proposed development

2.3 As explained in Section 1 the permit was issued to PCE on 8 March 2012 for the creation of a platform for the construction of an equestrian facility. Following the grant of planning permission reference 16/01399/HYBR the site is being developed for a new link road and employment use. To facilitate the construction of the components of the development the subject of the planning permission within the boundary of the site it is necessary to make revisions to the ground levels compared with those the subject of the permit and also to deposit waste materials in the repositories to the north west and south east of the area the subject of the permit.

- 2.4 It is necessary to vary the permit to provide for the revisions to the ground levels compared with those currently the subject of the permit and also to increase the permit boundary to provide for the deposit of waste in the repositories to the north west and south east of the area currently the subject of the permit. Taking each of these components of the proposed development in turn.

Revisions to the ground levels compared with those the subject of the permit⁶

- 2.5 The proposed ground levels are shown on Figure ESSD 4A. Currently the ground levels shown on Figure ESSD 4A generally are exceeded in the areas currently the subject of the permit and some of the waste materials deposited are inconsistent with the waste types which were authorised for deposit. In the area of the new link road the waste materials have been excavated and removed from site consistent with an Operational Management Plan² which was agreed with the EA.
- 2.6 The implementation of the remedial measures in the remaining area which is the subject of the permit to the west of the link road to deliver the proposed ground levels shown on Figure ESSD 4A and to address the non-conforming wastes will be the subject of Action Plans which will be agreed with the EA. As explained in Section 1 the remaining waste will be remediated such that it is consistent with the definition of inert specified in Section 2.1.2 of the Annex to the Council Decision of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC⁴.
- 2.7 Cross sections through the site showing the current ground levels, the ground levels the subject of the permit and the proposed ground levels are shown on Figure ESSD 4B.

Increase the permit boundary to provide for the deposit of waste materials in the repositories to the north west and south east of the area currently the subject of the permit

- 2.8 To deliver the ground levels shown on Figure ESSD 4A in the areas of the site to the north west and south east of the area currently the subject of the permit it will be

⁶ Note that the general cut and fill balance at the site is cut within the area the subject of the current permit and fill within the repositories outside the current permit. There are areas of the site where this is not the case to ensure the delivery of the levels shown on Figure ESSD 4A. In these areas the cut and fill balance is the opposite.

necessary to deposit waste⁷. These areas are referred to as the north west and south east repositories. The waste materials which will be deposited in the repositories will comprise waste materials excavated from elsewhere on site. Although the waste materials have, in effect, already been accepted at the site the waste materials deposited in the repositories will be subject to rigorous Waste Deposition Procedures (WDP) to ensure that only inert waste materials are deposited. A copy of the detailed WDP are presented at Appendix L of the Application Report. In the unlikely event that it is necessary to import additional waste materials to the repositories to facilitate construction of the development platform the imported wastes will also comprise inert waste materials only and will be subject to the WDP.

2.9 It is estimated that it will be necessary to deposit approximately 195,600m³ of inert waste materials in the repositories which comprises 168,100m³ in the north west repository and 27,500m³ in the south east repository. Cross sections through the site showing the current ground levels and the proposed ground levels are shown on Figure ESSD 4B.

2.10 As explained in Paragraph 1.7 it is proposed only to permit the newly deposited waste and not the underlying waste. The proposed permit boundary is shown on Figures ESSD 2B(i) and 2B(ii). As it is proposed only to permit the newly deposited waste and not the underlying waste the 3D Environmental Permit basal profile of the north west and south east repositories comprises the current ground level. As explained in paragraph 1.10 remediation of the waste materials in the permitted area will be implemented at the site. Remediation of the waste beneath the north west and south east repositories also will be carried out. In the event that the remediation of the waste beneath the north west and south east repositories results in a change to the 3D Environmental Permit basal profile of the north west and south east repositories then revised basal profile will be submitted to the Environment Agency. It is proposed that this issue in the subject of a suitably worded Improvement Condition.

⁷ As shown on Figures ESSD 2B(ii) there are also areas in the repositories where it is necessary excavate waste.

3. Pathway and receptor

- 3.1 As explained in Sections 1 and 2 extensive site investigation works have been carried out at the site and a summary of the ground conditions at the site was prepared by MJCA in December 2020. The report of the summary of the ground conditions is presented at Appendix ESSD E. In addition to a summary of the ground conditions the report includes information on the pathways and receptors including information on the geological, hydrogeological and hydrological setting of the site and the results of the extensive monitoring carried out at the site. Two further site investigations have been carried out at the site. An extensive trial pitting exercise was carried out by PCE in November 2020 and a detailed site investigation was carried out by Vertase FLI in January 2021. The report of the trial pitting carried out in November 2020 is presented at Appendix ESSD F and the factual report of the January 2021 site investigation is presented at Appendix ESSD G.

4. Pollution control measures and monitoring

Basal and side slope engineering

- 4.1** As explained above it is necessary to vary the permit to provide for the revisions to the ground levels compared with those currently the subject of the permit and also to increase the permit boundary to provide for the deposit of waste in the repositories to the north west and south east of the area currently the subject of the permit.
- 4.2** Waste materials have been deposited across the entire footprint of the site without basal engineering and as such it is not possible to provide retrospectively basal engineering. The site comprises a land raise hence side slope engineering is not relevant. Notwithstanding this and as explained above the waste materials within the currently permitted area will be remediated consistent with the definition of inert specified in Section 2.1.2 of the Annex to the Council Decision of 19 December 2002 establishing criteria and procedures for the acceptance of waste at landfills pursuant to Article 16 of and Annex II to Directive 1999/31/EC⁴ and it is proposed that the materials which will be deposited in the north west and south east repository areas will comprise waste materials excavated from elsewhere on site. The waste materials will be subject to rigorous WDP to ensure that only inert waste materials are deposited. In the unlikely event that it is necessary to import additional waste materials to the repositories to facilitate construction of the development platform the imported wastes will also comprise inert waste materials only and will be subject to the WDP.
- 4.3** Given that the waste materials in the area currently the subject of the permit and the waste material deposited in the north west and south east repositories will comprise inert waste materials only it is considered that the waste will not comprise a contaminant source with the potential to have a significant detrimental effect on groundwater or surface water quality. On this basis it is considered that basal engineering comprising an attenuation layer or an engineered barrier is not necessary in order to protect groundwater and surface water quality. This approach is consistent with that the subject of the current Environmental Permit which did not necessitate basal engineering for the waste types proposed. No changes to the waste types are proposed as part of this variation application.

- 4.4 The waste materials in the area of the new link road in the north east of the site have been excavated and removed hence basal engineering comprising an attenuation layer or an engineered barrier in this area is not necessary.

Capping

- 4.5 As the waste materials in the area currently the subject of the permit and the waste material deposited in the north west and south east repositories will comprise inert waste materials only it is not necessary to construct a cap or provide cap protection soils.

- 4.6 The waste materials in the area of the new link road in the north east of the site have been excavated and removed hence it is not necessary to construct a cap or provide cap protection soils in this area.

Restoration

- 4.7 The site is being developed for highway and employment use the subject of planning permission reference 16/01399/HYBR. Accordingly the restoration of the site is the subject of planning permission reference 16/01399/HYBR.

Surface water management

- 4.8 The site is being developed for highway and employment use the subject of planning permission reference 16/01399/HYBR. Accordingly, surface water management during the development of and following the restoration of the site is the subject of planning permission reference 16/01399/HYBR.

- 4.9 The design and specification of the surface water management system is included in the detailed site design specification produced by the technical specialists responsible for the design and construction of the wider development which is discussed in more detail in the Application Report.

Post closure controls (aftercare)

- 4.10 The site is being developed for highway and employment use the subject of planning permission reference 16/01399/HYBR. As such the aftercare will comprise highway and employment use. The waste materials in the area of the new link road in the

north east of the site have been excavated and removed. An application to partially surrender the permit for the area of the new link road will be submitted shortly.

- 4.11** As the waste materials in the remaining area currently the subject of the permit and the waste material deposited in the north west and south east repositories will comprise inert waste materials only no leachate or landfill gas management systems will be necessary. Under the Environmental Permitting (England and Wales) Regulations 2016 the Environmental Permit may be surrendered only when it is concluded that the facility no longer presents a risk to the environment. Applications will be submitted to partially surrender/surrender the permit following the collection, as necessary, of monitoring data following the completion of the works at the site. The partial surrender/surrender applications will be supported by the records of the remediation carried out in the currently permitted area and the records of waste materials deposited in the north west and south east repositories together with gas, surface water and groundwater monitoring records as necessary which will confirm the inert nature of the waste materials. A summary of the proposed monitoring is presented below.

Gas monitoring

- 4.12** Although not specified in the permit gas monitoring is currently carried out at the site on a monthly basis in a series of boreholes both within and external to the waste as detailed in Table ESSD 1. The monitoring locations are shown on Figure ESSD 7⁸. In addition to the monthly gas monitoring carried out at the site, gas monitoring has also been undertaken as part of the extensive site investigatory works carried out at the site. The results of the gas monitoring are summarised in the report of the summary of the ground conditions which is presented at Appendix ESSD E and the report of a site investigation carried out by Vertase FLI in January 2021 presented at Appendix ESSD G.
- 4.13** Gas monitoring in the boreholes will continue in accordance with Table ESSD 1 during the remediation of the site for as long as the monitoring boreholes remain in place prior to their removal as part of the construction of the development the subject of the planning permission. The removal and decommissioning of boreholes will, as

⁸ Monitoring is no longer carried out and will not be carried out in the area of the link road as the waste has been excavated and removed from the site.

necessary, be the subject of Construction Quality Assurance (CQA) which will be agreed with the EA through the submission of a CQA Plan(s) and CQA Verification Report(s).

4.14 It is stated in the EA Waste Recovery Guidance⁹ (the Recovery Guidance) that:

'Where your risk assessment suggests there is a risk of gas and you plan to deposit waste more than 2 metres below the surrounding ground surface, you must monitor your waste for:

- *Methane*
- *carbon dioxide*
- *oxygen*

You must install the appropriate number of monitoring boreholes per hectare as indicated by your risk assessment. The boreholes must extend to the full depth of the waste.

You can rely on searcher bar (also called spike test) monitoring where the total depth of the waste is less than 4 metres, or before the deposit is complete. You must record the atmospheric pressure when you take gas readings.'

4.15 As explained in the Gas Risk Assessment (GRA) presented at Appendix G of the Application Report the waste materials deposited within the currently permitted area will be remediated in accordance with Action Plans such that the waste which will remain within the currently permitted area¹⁰ will comprise inert waste. The materials which will be deposited within the repositories will comprise inert waste. As only negligible quantities of potentially biodegradable waste materials which could be degraded to generate gas will be deposited after remediation within the currently permitted area and within the repositories, a source of gaseous contamination will not

⁹www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-recovery-plans-and-deposit-for-recovery-permits

¹⁰ And areas of the currently permitted area where the cut and fill balance is such that the deposition of waste materials will be necessary to ensure the delivery of the development platform levels.

be present. As there will be no source present there is no exposure pathway and therefore no significant risk from gas.

- 4.16** It is proposed that a programme of confirmatory gas monitoring is carried out in the currently permitted area to confirm the effectiveness of the remedial works and to provide data for use in a subsequent application to surrender the permit for this area of the site. It is proposed that confirmatory gas monitoring of the waste is carried out both during the remediation (the operational phase) and for a period following the completion of the remediation of the waste (the post closure phase).
- 4.17** In the operational phase it is proposed that the confirmatory gas monitoring will be carried out using the searcher bar technique as detailed in Table ESSD 1. The searcher bar technique is a monitoring technique which, in accordance with the EA guidance, can be used to collect monitoring data during the operational phase in all three dimensions such that data is collected progressively through the full thickness of the waste mass as the remediation and deposition of waste progresses.
- 4.18** The post-closure monitoring will be discussed with the EA prior to the closure of the site as part of pre-application discussions regarding the application(s) to partially surrender/surrender the permit. It is anticipated that the total depth of waste which will remain after the remediation in the currently permitted area will generally be less than 4m. On this basis and in accordance with the EA guidance it is anticipated that post closure monitoring in the currently permitted area will comprise the searcher bar technique which may be supplemented by boreholes in areas where the waste depth may exceed 4m.
- 4.19** Given the inert nature of the waste that will be deposited in the north west and south east repositories and the strict WDP which will be implemented during their deposition the potential for landfill gas generation is negligible. On this basis it is considered that gas monitoring in the areas of the repositories is unnecessary. It is anticipated that application(s) to partially surrender/surrender the permit for the north west and south east repositories will be based on the records for the waste inputs which will be used to demonstrate that inert waste materials only have been deposited in the repositories.

Groundwater monitoring and surface water monitoring

- 4.20** Although not specified in the permit groundwater and surface water monitoring is currently carried out at the site on a quarterly basis as detailed in Table ESSD 1. The monitoring locations are shown on Figure ESSD 7⁸. The results of the groundwater and surface water monitoring are summarised in the report of the summary of the ground conditions which is presented at Appendix ESSD E.
- 4.21** Groundwater monitoring will continue in accordance with Table ESSD 1 during the remediation of the site for as long as the monitoring boreholes remain in place prior to their removal as part of the construction of the development the subject of the planning permission. The removal and decommissioning of boreholes will, as necessary, be the subject of CQA which will be agreed with the EA through the submission of a CQA Plan(s) and CQA Verification Report(s).
- 4.22** Surface water monitoring will continue in accordance with Table ESSD 1 during the remediation of the site. The surface water monitoring regime will be amended as necessary during the remediation based on any changes to the surface water regime at the site. Any changes will be agreed with the EA and will be based on the principle that both upstream and downstream surface water monitoring will be carried out.
- 4.23** It is proposed that a programme of confirmatory groundwater and surface water monitoring is carried out in respect of the currently permitted area following the completion of the remediation of the waste and the closure of the site. The groundwater and surface water monitoring will be carried out to confirm the effectiveness of the remedial works and to provide data for use in a subsequent application to surrender the permit for this area of the site. The proposed programme of post-closure groundwater and surface water monitoring is presented in Table ESSD 2 and the proposed groundwater and surface water monitoring locations are shown on Figure ESSD 7. As shown on Figure ESSD 7 it is proposed that an additional up hydraulic gradient groundwater monitoring borehole will be installed. within 3 months of the issue of the variation notice in respect of the permit. The installation of the borehole will be the subject of CQA which will be agreed with the EA through the submission of a CQA Plan and a CQA Verification Report. Groundwater monitoring boreholes MW01A and MW02 are located down hydraulic gradient of the site. It is intended to retain these boreholes or where the boreholes need to be removed to facilitate development of the site to reinstate or relocate the

groundwater monitoring boreholes. If it is necessary to reinstate or relocate the boreholes then the works will be the subject of CQA.

- 4.24** As explained above, the surface water monitoring regime will be amended as necessary during the remediation based on any changes to the surface water regime at the site. Any changes will be agreed with the EA and will be based on the principle that both upstream and downstream surface water monitoring will be carried out. The changes will be incorporated into the post-closure monitoring as necessary.
- 4.25** The post-closure monitoring will be discussed with the EA prior to the closure of the site as part of pre-application discussions with the EA regarding the application(s) to partially surrender/surrender the permit. If appropriate and with the agreement of the EA consideration will be given to increasing the monitoring carried out. The objective of increasing the monitoring carried out at the site will be to shorten the timescale over which data is collected for use in application(s) to partially surrender/surrender the permit.
- 4.26** In respect of the north west and south east repositories negligible volumes of biodegradable waste materials which could result in the generation of leachate will be deposited in the repositories. On this basis it is considered that groundwater and surface water monitoring specifically related to the repositories is unnecessary. It is anticipated that application(s) to partially surrender/surrender the permit in so far as it relates to the north west and south east repositories will be based on the records of the waste inputs which will be used to demonstrate that inert waste materials only have been deposited in the repositories.

5. Site Condition Report

5.1 The application is necessary to authorise the permanent deposit of waste on land to develop the site for highway and employment use in accordance with the obligations in planning permission reference 16/01399/HYBR. The section of the ESSD guidance¹¹ (recently withdrawn) relevant to preparation of a Site Condition Report states:

“A site condition report (SCR) is not necessary for parts of a permitted activity where you permanently deposit waste. An SCR is necessary for areas of the permitted site where you have not deposited any waste (eg site access areas, site offices, weigh bridge, wheel wash etc)”

5.2 As the proposed Environmental Permit boundary comprises only the extent of the area in which waste has been and will be deposited permanently there are no areas of the site in which waste will not be deposited hence accordingly it is unnecessary to provide an SCR with the application.

¹¹ Conceptual Site Model, Environmental Setting and Site Design Report” Version 1 dated 14 October 2016

TABLES

Table ESSD 1

Programme of environmental monitoring during the operational phase

Monitoring Type	Locations ^{1,2}	Frequency ⁴	Parameters ³
Gas - monitoring boreholes	MW01, MW02, MW03, MW05, MW06, GW1 to GW15, WS103, WS113 & WS119	Monthly	Methane, carbon dioxide, oxygen, differential pressure, flow rate, water level & total depth.
Gas - searcher bar technique	Generally on a 50m grid within the operational area currently the subject of the permit ⁵	Fortnightly	Methane, carbon dioxide and oxygen.
Groundwater	MW01, MW02, MW03, MW05, MW06, GW1, GW2, GW5, GW6, GW7, GW9, GW11, GW12, GW13, GW14 & GW15 ⁶	Quarterly	pH, electrical conductivity, water temperature, ammoniacal nitrogen, chloride, arsenic, cadmium, chromium, copper, nickel, lead, mercury, selenium, zinc (all metals to be analysed as dissolved metals), total petroleum hydrocarbons (<C6 to C40 and no banding or speciation) & polycyclic aromatic hydrocarbons.
Surface water	SW1 to SW8 ⁷	Quarterly	pH, electrical conductivity, water temperature, ammoniacal nitrogen, chloride, dissolved organic carbon, calcium, arsenic, cadmium, chromium, copper, nickel, lead, mercury, selenium, zinc (all metals to be analysed as dissolved metals), total petroleum hydrocarbons (<C6 to C40 and no banding or speciation) & polycyclic aromatic hydrocarbons.

Notes

- Locations are shown on Figure ESSD 7.
- The monitoring boreholes will be monitored during each monitoring visit until such time as the boreholes are lost as part of the remediation and construction of the development.
- Meteorological and ground conditions will be recorded during each monitoring visit.
- Or alternative monitoring frequency agreed with the Environment Agency.
- Given that the waste which will be deposited in the repositories will be the subject of rigorous Waste Deposition Procedures (WDP) such that only inert waste materials are deposited in the repositories it is considered not necessary to carry out gas monitoring by the searcher bar technique in the areas of the repositories.
- The proposed up hydraulic gradient borehole will be added to the monitoring regime as soon as it is installed.
- The surface water monitoring regime will be amended as necessary during the operational period based on any changes to the surface water regime at the site. Any changes will be agreed with the Environment Agency and will be based on the principle that both upstream and downstream surface water monitoring will be carried out.

Table ESSD 2

Programme of environmental monitoring following the closure of the site¹

Monitoring Type	Locations ²	Frequency ⁵	Parameters ³
Groundwater	The additional up hydraulic gradient borehole, MW01 & MW02	Monthly	pH, electrical conductivity, water temperature, ammoniacal nitrogen, chloride, arsenic, cadmium, chromium, copper, nickel, lead, mercury, selenium, zinc (all metals to be analysed as dissolved metals), total petroleum hydrocarbons (<C6 to C40 and no banding or speciation & polycyclic aromatic hydrocarbons.
Surface water	SW01 to SW08 ⁴	Monthly	pH, electrical conductivity, water temperature, ammoniacal nitrogen, chloride, dissolved organic carbon, calcium, arsenic, cadmium, chromium, copper, nickel, lead, mercury, selenium, zinc (all metals to be analysed as dissolved metals), total petroleum hydrocarbons (<C6 to C40 and no banding or speciation) & polycyclic aromatic hydrocarbons.

Notes

1. As detailed in Section 4.18 post-closure gas monitoring will be discussed with the EA prior to the closure of the site as part of pre-application discussions regarding the application(s) to partially surrender/surrender the permit.
2. Locations are shown on Figure ESSD 7.
3. Meteorological and ground conditions will be recorded during each monitoring visit.
4. The surface water monitoring regime will be amended as necessary based on any changes to the surface water regime at the site. Any changes will be agreed with the Environment Agency and will be based on the principle that both upstream and downstream surface water monitoring will be carried out.
5. If appropriate and with the agreement of the Environment Agency consideration will be given to increasing the monitoring carried out. The objective of increasing the monitoring carried out at the site will be to shorten the timescale over which data is collected for use in application(s) to partially surrender/surrender the Environmental Permit.

FIGURES

APPENDICES

APPENDIX ESSD A

A COPY OF PLANNING PERMISSION REFERENCE 16/01399/HYBR

APPENDIX ESSD B

**DRAWING SP(90)38 SHOWING THE BOUNDARY OF PLANNING PERMISSION
REFERENCE 16/01399/HYBR**

APPENDIX ESSD C
ILLUSTRATIVE MASTERPLAN OF THE DEVELOPMENT

APPENDIX ESSD D

**THE ENGINEERING DETAILS OF THE NORTH WESTERN AND NORTH EASTERN
SLOPES**

APPENDIX ESSD E

**A SUMMARY OF THE GROUND CONDITIONS AT HARESHILL SITE, HEYWOOD THE
SUBJECT OF ENVIRONMENTAL PERMINT NUMBER EPR/CB3738AC**

APPENDIX ESSD F

**A REPORT OF THE SITE INVESTIGATION CARRIED OUT IN NOVEMBER 2020 AT THE
HARESHILL FARM SITE, HARESHILL ROAD, HEYWOOD**

APPENDIX ESSD G

1883PCA- FACTUAL REPORT, HARESHILL ROAD, HEYWOOD, SOUTH ROCHDALE