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**London Luton Airport Expansion Development Consent
Order 202x**

**5.02 ENVIRONMENTAL STATEMENT APPENDIX 10.6 CULTURAL
HERITAGE MANAGEMENT PLAN**

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1 INTRODUCTION

1.1 Overview

- 1.1.1 This document has been prepared by Luton Rising (a trading name for London Luton Airport Limited ('the Applicant')) as part of the Environmental Statement (ES) submitted in support of the application for development consent for the expansion of London Luton Airport (the airport) from 18 million passengers per annum (mppa) to accommodate 32 mppa (hereby referred to as the 'Proposed Development').
- 1.1.2 This document presents a Cultural Heritage Management Plan (CHMP), which sets out the protocols and mechanisms for how cultural heritage is to be protected in a consistent and integrated manner. The CHMP also sets out the preliminary scope of additional cultural heritage investigation and mitigation that is to be delivered as a requirement of the Development Consent Order (DCO).
- 1.1.3 Additional investigation and mitigation strategies that will be necessary as a result of the Proposed Development comprise:
- a. Additional trial trench evaluation;
 - b. Detailed archaeological excavation;
 - c. Targeted archaeological monitoring during construction and operation; and
 - d. Protocols to be adopted for dealing with unexpected archaeological discoveries.
- 1.1.4 This CHMP has been prepared in consultation with relevant heritage stakeholders including Historic England; the Archaeologist for Central Bedfordshire Council (CBC), acting as archaeological advisor to Luton Council; the Archaeology Advisor for Hertfordshire County Council (HCC) and the Conservation Officer for CBC.

1.2 Relationship to other documents

Chapter 10 Cultural Heritage of the ES

- 1.2.1 This CHMP details the additional evaluation and mitigation measures that are set out in Section 10.10 Additional mitigation, of **Chapter 10 Cultural Heritage of the ES [TR020001/APP/5.01]**.

Code of Construction Management

- 1.2.2 The Code of Construction Practice (CoCP) (**Appendix 4.2 of the ES [TR020001/APP/5.02]**) is the overarching document for all construction-related activity. It includes control measures and standards to be implemented throughout the construction of the Proposed Development. **Section 11** Heritage of the CoCP requires the Applicant and the lead contractor to manage the impact of construction works on cultural heritage assets and to undertake works in accordance with the CHMP.

Site Specific Written Schemes of Investigation

- 1.2.3 For each stage of archaeological work specified in this CHMP, the Applicant's Archaeological Contractor will prepare a Site Specific Written Scheme of Investigation (SSWSI) that outlines the specific measures that will apply to deliver the scope of work. Each SSWSI must include the matters set out in **Section 4** of this CHMP. Each SSWSI will be prepared by the Archaeological Contractor in consultation with the relevant local authority Archaeology Advisor for CBC and HCC and, where appropriate, Historic England.

2 ROLES AND RESPONSIBILITIES

2.1 The Applicant's responsibilities

- 2.1.1 The Applicant will appoint an Archaeological Clerk of Works (ACoW) who will manage the programme of archaeological investigation and ensure compliance with this CHMP and each SSWSI.
- 2.1.2 The Applicant, or their lead contractor, will appoint an Archaeological Contractor to deliver the programme of archaeological works.

2.2 ACoW and Archaeological Contractor responsibilities

- 2.2.1 The Archaeological Contractor will prepare a SSWSI for each stage of archaeological work specified in this CHMP.
- 2.2.2 The Archaeological Contractor will have responsibility for the delivery of the programme of archaeological works set out in this CHMP and each SSWSI. The delivery of the works includes:
- a. All on- and off-site works, including the delivery of the Public Outreach Strategy.
 - b. Technical and non-technical publication and dissemination of the results of the archaeological investigations, including those undertaken prior to and after the DCO is made.
 - c. Preparation and deposition of the archaeological project archive with the recipient museum.
- 2.2.3 The ACoW will monitor the relevant contractor's compliance with all archaeological and historic environment consents, including the DCO, CHMP and each SSWSI, and those arising from the CoCP, as applicable, throughout the relevant phases of the Proposed Development.
- 2.2.4 The ACoW's responsibilities are:
- a. To review relevant sections of the CoCP (**Appendix 4.2** of the ES **[TR020001/APP/5.02]**), when prepared by the Applicant's Lead Contractor.
 - b. To ensure compliance with the DCO.
 - c. To ensure that all archaeological elements of the CoCP are complied with during construction.

2.2.5 The ACoW's overall responsibilities are:

- a. To ensure that the Proposed Development complies with all archaeological and historic environment legislation and consents.
- b. To give Tool Box Talks, where required, to inform all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required, and their obligations under the CoCP (**Appendix 4.2** of the ES [TR020001/APP/5.02]).
- c. To monitor construction works to ensure that the CoCP, the CHMP and the methodologies of each SSWSI are carried out.
- d. To monitor protection measures to ensure these are in place and maintained appropriately throughout the construction period in compliance with the CHMP and lead contractor's Method Statement.
- e. Liaise with and provide guidance for all contractors in relation to the requirements of the CHMP and each approved SSWSI.
- f. Monitor fieldwork at all stages (fieldwork and post-excavation reporting stages) to ensure consistency of approach and compliance with the CHMP and each SSWSI.
- g. Provide monitoring feedback to and liaise with heritage stakeholders during site meetings, including compliance or non-compliance issues and how these are being resolved with respect to the CHMP and each SSWSI.

3 CONSENTS, MONITORING AND APPROVALS

3.1 Consents

3.1.1 The programme of archaeological work set out in this CHMP will be delivered as a requirement of the DCO. Additional consents are not required for the works.

3.2 Monitoring

3.2.1 The ACoW will liaise with the Archaeological Contractor to monitor progress and compliance with the requirements of this CHMP and each approved SSWSI. This will include (but not be limited to):

- a. Monitoring of all aspects of fieldwork.
- b. Monitoring of the installation and removal of protective measures.
- c. Co-ordination of access and monitoring arrangements with the relevant Archaeology Advisors for CBC and HCC.
- d. Oversight of engagement between the Archaeological Contractor's specialists and the relevant heritage stakeholders, to ensure the timely provision of on-site advice to the fieldwork team (if applicable), and off-site advice during the post-excavation phase.

Stakeholders and statutory roles

3.2.2 Implementation of the CHMP and each SSWSI will also be monitored by the Archaeology Advisors for CBC and HCC, as relevant.

3.2.3 Site monitoring meetings will be held as necessary throughout the archaeological programme to ensure adherence to the CHMP and each approved SSWSI, to enable effective decision making, where required, and to support timely 'sign-off' of archaeological completion.

Site meetings

3.2.4 It is anticipated that monitoring meetings will be held weekly during fieldwork. Attendees will normally include, but not be limited to the following, as required:

- a. ACoW.
- b. Archaeological Contractor.
- c. Archaeology Advisors for CBC and HCC.
- d. The Applicant or their lead contractor.

Progress reports

3.2.5 The Archaeological Contractor will prepare weekly progress reports for the duration of each stage of site-specific archaeological works. The reports will be issued to the ACoW who will distribute them to the Applicant or their Lead Contractor and the Archaeology Advisors for CBC and HCC. The progress reports will include as a minimum:

- a. General progress and current programme.
- b. Programme and resources lookahead.
- c. Contractor issues/ performance.
- d. Site-specific issues (access/ constraints etc.).
- e. Safety, Health and Environmental (SHE) issues.
- f. AOB.

Approvals and sign-off of archaeological works

- 3.2.6 Site works that have been completed (confirmed as completed during a site meeting and agreed between the ACoW and the relevant Archaeology Advisor for CBC and/or HCC) will be subject to a sign-off procedure. The Archaeological Contractor will submit a completion statement to the ACoW who will distribute it to the Applicant or their lead contractor. The ACoW will also submit the completion statement to the relevant Archaeology Advisor for CBC and/or HCC as confirmation that the relevant works have been completed in compliance with each SSWSI. Construction works can commence only after the sign-off procedure has been confirmed in writing by the relevant local authority Archaeology Advisor.

4 ARCHAEOLOGICAL CONTRACTOR'S SSWSI

4.1.1 Prior to the start of each stage of archaeological fieldwork, the Archaeological Contractor will prepare a detailed SSWSI for the archaeological works for approval by the Applicant, the ACoW and the relevant local authority Archaeology Advisor.

4.1.2 Each SSWSI will be prepared in consultation with the relevant local authority Archaeology Advisor, the Applicant and the ACoW and will take into account relevant health and safety policies of the Applicant's lead contractor. Each SSWSI will contain as a minimum:

- a. a statement on the technical, research and ethical competencies of the project team, including relevant professional accreditation;
- b. site location (including map);
- c. geological and topographical information;
- d. relevant archaeological and historical background;
- e. general and specific research aims of the project, with reference to Regional Research Frameworks;
- f. the Archaeological Contractor's methods and approach for undertaking the site-based works and off-site processes to completion;
- g. the methods for survey and setting out works;
- h. methodology for machine excavation, soil storage and management;
- i. details of specific survey methods for on-site recording of stratigraphic profiles and topographic modelling;
- j. methodology for hand excavation and excavation sample proposals;
- k. the Archaeological Contractor's strategy for environmental sampling and archaeological science;
- l. the retention and disposal policies for samples and artefacts recovered during the work;
- m. the methodology of finds storage including packaging;
- n. the method for excavating and recording inhumations and cremations in compliance with this CHMP and relevant best practice and guidance (refer to **Annex A** of this CHMP);
- o. proposals for Public Outreach during the on-site fieldwork and off-site stages of work (refer to **Section 5** of this CHMP);
- p. arrangements for the immediate conservation of artefacts;
- q. the method for preparation of the required reports, archive and all associated deliverables;
- r. the procedures for assessment of potential for analysis (post excavation assessment);
- s. analysis and dissemination/ publication proposals;

- t. the method for preparation of the digital dataset, digital drawings, and digital report deliverables;
- u. a statement on compliance with relevant professional ethical and technical standards (including data standards);
- v. a Quality Assurance Plan;
- w. a resource plan, programme and CVs of key personnel including post-excavation specialists;
- x. the safe method of working whilst undertaking machine excavation including any temporary works required;
- y. the Health and Safety Plan and Site-Specific Risk Assessment; and
- z. the procedures for on-site and off-site security and emergency response plan (including environmental incidents) in accordance with the Applicant's lead contractor's site rules.

4.1.3 Each SSWSI will be prepared in accordance with the methodologies set out in this CHMP, as well as relevant guidance published by ClfA and other current and relevant good practice and standards and guidance, as set out in **Annex A**.

5 OUTLINE PUBLIC OUTREACH STRATEGY

5.1.1 The Archaeological Contractor will discuss and agree a public outreach strategy with the Applicant, the Applicant's lead contractor and heritage stakeholders, including the Archaeology Advisors for HCC, CBC and Historic England, if appropriate. If relevant and appropriate to the specific scope of work, each SSWSI produced by the Archaeological Contractor will set out an agreed Public Outreach Strategy.

5.1.2 The following represents a proposed outline Public Outreach Strategy. It sets out proposals for engagement which can be developed further by the Archaeological Contractor in their final Public Outreach Strategy.

5.2 Aims and Objectives

5.2.1 The aim of the Public Outreach Strategy will be to raise awareness of the significance of heritage assets identified during archaeological investigations within the Main Application Site (as defined in **Chapter 2** of the ES [TR020001/APP/5.01]), and to encourage the interaction and engagement with the archaeological process and discoveries arising from the mitigation works.

5.2.2 The objectives of the Public Outreach Strategy will:

- a. encourage engagement with the historic environment;
- b. advance public understanding of the historic environment;
- c. advance public understanding of developer-led archaeology, explain how the Applicant commits to a level of archaeological investigation to comply with planning policy;
- d. create learning opportunities for people to be more involved in archaeology; and
- e. look for opportunities to make the results of archaeological investigation more accessible.

5.2.3 The final agreed Public Outreach Strategy will be set out in each SSWSI, if relevant and appropriate to the specific scope of work, and may include site-based activities, initiative undertaken during ongoing excavations, and activities throughout the post-excavation phase.

5.3 Methodology

5.3.1 A range of activities will be developed, in consultation with heritage stakeholders, and also influenced by advice from community groups. A schedule of activities will be developed which will reflect the programme for the archaeological works, on site and post-excavation stages, and will be linked, where possible, to local and regional arts, museums, STEM and heritage events programmes.

5.4 Participants

5.4.1 The Public Outreach Strategy will aim to engage with the following:

- a. local communities;
- b. members of local archaeological, history and civic societies;
- c. Young Archaeology Clubs and regional groups of the Council for British Archaeology;
- d. primary and secondary school pupils; and
- e. Higher Education students.

5.5 Activities

5.5.1 It is anticipated that the Public Outreach Strategy will comprise several activities that may comprise some of the following:

- a. site based activities, such as guided tours and site open days. These will be subject to health, safety and access considerations;
- b. participative learning events such as pop-up exhibitions and finds-handling;
- c. display and interpretation such as:
 - i. Provision of information panels on archaeological excavations;
 - ii. Temporary exhibitions, interpretation and displays organised in partnership with local museums;
 - iii. Permanent or semi-permanent displays and information panels, possibly within Luton Airport (subject to permissions) to allow users of the airport an opportunity to learn about the archaeological fieldwork results;
- d. classroom-based archaeology sessions, aimed at involving children and teachers in their local cultural heritage;
- e. public talks with local community organisations and local societies, some of which could be posted online to reach a wider audience.

5.6 Media and Communications

5.6.1 The Public Outreach Strategy programme will be disseminated through a range of media to reach a wide and diverse audience. This may include social media platforms, for example, Twitter, Instagram and Facebook, local radio and TV, notices in local libraries, and parish newsletters. All communication with media channels will be managed by the Applicant's communications team in consultation with relevant heritage stakeholders.

6 RESEARCH FRAMEWORKS AND REGIONAL RESEARCH AGENDAS

- 6.1.1 The Desk Based Assessment (DBA) (**Appendix 10.1** of this ES [TR020001/APP/5.02]) identified the Main Application Site to have a high potential for archaeological remains dating to the Iron Age, Roman, post-medieval and modern periods. The results of archaeological investigations undertaken for the Proposed Development have confirmed the presence of Late Iron Age / Early Roman and Roman activity within the Order Limits.
- 6.1.2 The broad principles of a number of existing research agendas will be applicable to any future archaeological investigation and will be considered by the Archaeological Contractor in the production of each SSWSI.
- 6.1.3 Key archaeological research agendas include:
- a. Understanding the British Iron Age: an agenda for action (Ref. 1);
 - b. Britons and Romans: advancing an archaeological agenda (Ref. 2); and
 - c. East of England Regional Research Framework (EERRF) Late Iron Age and Roman Research Agenda (Ref. 3).
 - d. Specific research themes identified from the relevant research agendas of particular relevant to the Late Iron Age / Early Roman and Roman activity identified within the Main Application Site include:
 - i. LIA-Rom 05: How can we better understand the Late Iron Age to Roman transition?;
 - ii. LIA-Rom 13: How can we increase our understanding of Late Iron Age and Roman farmsteads?;
 - iii. LIA-Rom 16: Can we better distinguish between Late Iron Age and Early Roman features and sites?;
 - iv. LIA-Rom 20: How can we improve the recovery of Late Iron Age and Roman buildings?;
 - v. Dating and chronology of Iron Age and Roman pottery;
 - vi. Distribution of Iron Age and Roman finds;
 - vii. The Iron Age – Roman transition including change in the use of land or continued occupation of a site but change in building types or agricultural practices;
 - viii. Is there evidence for assimilation of Late Iron Age culture into the Roman period or did acculturation occur?;
 - ix. Consideration of settlement form and type in the Iron Age including distribution, density and dynamics;
 - x. Determining the relationship between settlement and enclosure in both the Iron Age and Roman periods; and
 - xi. The characterisation of rural settlement in the Roman period including patterns of settlement nucleation or dispersal.
- 6.1.4 The research agendas and themes identified here are not exhaustive. Should the additional archaeological evaluations and the mitigation works produce evidence relevant to other themes and objectives identified in the research

agendas, these will be considered by the Archaeological Contractor as the project progresses.

- 6.1.5 Further research themes are outlined in the EERRF (Ref. 4) online resource and will be consulted so that the archaeology can, if possible, be placed within their local, regional and national context.
- 6.1.6 All archaeological works will be carried out in accordance with each approved SSWSI. The works will be undertaken in accordance, as required for that stage, with the guidance provided by the ClfA Code of Conduct (Ref. 5); the Standard and Guidance for archaeological field evaluation (Ref. 6); and other current and relevant good practice and standards and guidance (including those in **Annex A**).

7 SCOPE OF WORKS – ADDITIONAL TRIAL TRENCHING

7.1 Additional Trial Trenching

- 7.1.1 A programme of trial trenching has been completed for the Proposed Development to inform the ES. The results of these works are presented in **Appendix 10.5** and **Appendix 10.7** of the ES [TR020001/APP/5.02].
- 7.1.2 Further trial trenching is proposed in areas of the Main Application Site that fall within the administrative area of HCC. The scope of this trial trenching was described in a Written Scheme of Investigation (WSI) and has been agreed with the Archaeology Advisor for HCC (Ref. 7).
- 7.1.3 The additional trial trenching will be undertaken by an Archaeological Contractor appointed by the Applicant or their lead contractor.
- 7.1.4 The additional trial trenching will be undertaken in accordance with the approved WSI and an updated SSWSI, prepared by the Archaeological Contractor, that has been agreed with the Archaeology Advisor for HCC.
- 7.1.5 The additional trial trenching will be undertaken in areas of the Main Application Site where there is a potential for Late Iron Age and Roman archaeological remains to be present. The Archaeological Contractor's SSWSI will, in particular, consider the research aims that are applicable to the scope of work.
- 7.1.6 The results of the additional archaeological trial trenching may result in the requirement for archaeological mitigation, which may comprise detailed archaeological excavation and recording.

8 SCOPE OF WORKS – DETAILED ARCHAEOLOGICAL EXCAVATION

8.1 Detailed Archaeological Excavation of Roman Building

8.1.1 It has been agreed with the Archaeology Advisor for CBC that detailed archaeological excavation will be carried out at a Late Iron Age / Early Roman and Roman occupation site (HER 10808), located to the east of the Main Application Site as shown in **Figure 1** in **Appendix A** of this CHMP.

8.1.2 The following sets out the guiding principles for the excavation of the archaeological remains. The Archaeological Contractor will prepare an updated and detailed excavation methodology in a SSWSI which will be agreed with the Archaeology Advisor for CBC.

Machine Excavation

8.1.3 The spatial extent of the excavation area will be set out by the Archaeological Contractor using electronic survey equipment. The area will be clearly demarcated and secured with appropriate barrier fencing, supplied by the Archaeological Contractor, to ensure that persons or plant cannot inadvertently traverse across the area of investigation whilst archaeological works are in progress. The fencing will be regularly inspected and maintained by the Archaeological Contractor until the archaeological works have been inspected and confirmed as completed, in compliance with the sign-off procedure in **Section 3.2** of this CHMP.

8.1.4 The machine excavation will be undertaken using an appropriate 360° back-actor mechanical excavator fitted with a toothless ditching bucket. Topsoil and any underlying subsoil shall be removed by the mechanical excavator under archaeological supervision until either the top of the first archaeological horizon or undisturbed natural deposits are encountered. The machined surface will be cleaned and inspected for archaeological features.

Hand Excavation

8.1.5 The excavation area will be mapped using suitable electronic surveying equipment, resulting in a digital pre-excavation plan. The plan will be overlaid at an appropriate and recognisable scale onto the Ordnance Survey national grid using digital map data.

8.1.6 A sufficient sample of archaeological features and deposits will be hand excavated and recorded in an archaeologically controlled and stratigraphic manner in order to fulfil the aims and objectives of the approved SSWSI.

Artefact Recovery

8.1.7 All artefacts will be collected, stored and processed in accordance with standard methodologies and guidelines (refer to **Annex A** of this CHMP). The Archaeological Contractor will clarify their selection strategy in the SSWSI and will ensure that it complies with current guidelines and best practice.

- 8.1.8 All recovered artefacts will, where necessary, be stabilised, conserved and stored in accordance with the current conservation guidelines and standards (refer to **Annex A** of this CHMP). If necessary, the Archaeological Contractor will arrange for a conservator to visit the investigation site to undertake 'first aid' conservation treatment.
- 8.1.9 The Archaeological Contractor will be responsible for the safekeeping of all records and artefacts recovered during the fieldwork, from the moment of creation/ discovery, until their delivery to a recipient repository.

Environmental Sampling and Scientific Dating

- 8.1.10 The SSWSI for the detailed excavation will include an appropriate environmental sampling strategy which responds to the range and complexity of the archaeological remains and that is targeted to address relevant research themes and site-specific aims.
- 8.1.11 The Historic England Regional Science Advisor will be notified of the commencement of fieldwork (a minimum of 4 weeks' notice) and will be consulted by the Archaeological Contractor regarding the sampling strategy proposed.

Finds Processing

- 8.1.12 It is anticipated that the initial processing of finds (and bulk environmental samples) will be carried out concurrently with the fieldwork. This is so any initial results can be fed back to the site team and inform and influence the excavation and environmental sampling strategies. The methodology for the treatment, labelling and storage of finds will be set out in the SSWSI for detailed excavation and will comply with national guidelines (refer to **Annex A** of this CHMP) as well as local authority and recipient museum guidelines.

Human Remains

- 8.1.13 The SSWSI for detailed excavation will include a methodology for the treatment of human remains. If human remains are discovered during the course of the excavation, the Archaeological Contractor will notify the ACoW and H.M. Coroner immediately. The remains will be covered and protected and left in situ in the first instance, in accordance with current best practice. The removal of human remains will only take place in accordance with a licence from the Ministry of Justice and under the appropriate Environmental Health regulations and the Burial Act 1857.

Treasure Trove

- 8.1.14 The SSWSI for detailed excavation will include a methodology for dealing with items classed as treasure trove. Any recovered artefacts that fall within the scope of the Treasure Act 1996 and Treasure (Designation) Order 2002 will be reported immediately by the Archaeological Contractor to the ACoW and H.M. Coroner.

- 8.1.15 The Archaeological Contractor will ensure that the Treasure regulations are enforced and will maintain a list of finds that have been collected that fall under the Treasure Act. The final list shall be included in the fieldwork report.
- 8.1.16 Artefacts that are classified as treasure will be removed to a safe place by the Archaeological Contractor. Where removal cannot be undertaken on the same working day as the discovery, suitable security measures will be provided by the Applicant or the Applicant's lead contractor to protect the finds from damage or unauthorised removal.

8.2 Further Detailed Archaeological Excavation

- 8.2.1 Areas for further detailed excavation may be identified following the results of the additional trial trench evaluation, or as a result of unexpected archaeological discoveries (refer to **Section 10**). The methodology for further excavation will comply with this CHMP and any further SSWSI prepared by the Archaeological Contractor and will be agreed with the relevant local authority Archaeology Advisor.

9 SCOPE OF WORKS – ARCHAEOLOGICAL MONITORING

9.1 Archaeological Watching Brief

9.1.1 Archaeological monitoring will be undertaken in areas of the Main Application Site where no specific archaeological remains have been identified but a general potential for dispersed archaeological features or where a residual risk of archaeological discoveries remains.

9.1.2 This method of archaeological risk management will be used during construction of the proposed fuel pipeline in the area where it connects to the existing fuel pipeline, due to the potential for Roman archaeological remains to be present (see **Figure 1 in Appendix A**). This area could not be evaluated during previous archaeological trial trenching for the Proposed Development due to Health and Safety considerations and the requirement to maintain an exclusion zone around the existing pipeline.

9.1.3 The watching brief will target specific construction activities associated with the removal of topsoil associated with the pipeline connection. It will comprise a programme of observation, investigation and recording during construction and will allow the Applicant or the Applicant's appointed lead contractor's preferred method of working to be undertaken with minimal disruption whilst providing sufficient access and time for the recording of any archaeology present.

9.2 Air Quality Monitoring at Someries Castle

9.2.1 The air quality assessment in **Chapter 7** of the ES [TR020001/APP/5.01], predicted negligible change to air quality during the operational Proposed Development. As such, it was predicted there would be no impact to the fabric of Someries Castle scheduled monument as a result of the operational Proposed Development and significant effects were not predicted.

9.2.2 Whilst recognising the prediction of no significant effects, the Applicant has made a commitment to review changes to air pollutant concentrations in the **Green Controlled Growth (GCG) Framework [TR020001/APP/7.08]** which entails monitoring during the operational phase of the Proposed Development. An air quality monitoring location at Someries Castle is included in the proposed monitoring (located at E: 511922, N: 220193).

9.2.3 The air quality monitoring as part of the **GCG** work is detailed in Appendix D Air Quality Monitoring Plan of the **GCG Framework [TR020001/APP/7.08]** and a summary is provided in this CHMP.

Methodology

9.2.4 The principal pollutants to be monitored during operation comprise different sizes of Particulate Matter (PM₁₀, PM_{2.5}) and Nitrogen Oxides (NO_x) – in particular Nitrogen Dioxide (NO₂). The monitoring equipment proposed for each site, including Someries Castle, will consist of two NO₂ diffusion tubes and one continuous sensor monitoring system (AQMesh or equivalent) measuring NO₂, PM₁₀ and PM_{2.5}.

- 9.2.5 The AQMesh or equivalent monitoring system will be used to provide ongoing real-time data via an online portal, recognising that the data will be unvalidated so subject to ratification and validation. NO₂ diffusion tubes will be included at each location and changed monthly. Diffusion tubes will be co-located with MCERT¹ monitoring stations to allow for local bias adjustment.
- 9.2.6 The assessment of compliance with the NO₂ annual mean will be assessed based on the annual results from the diffusion tubes. The diffusion tube supplier and analysis method has been agreed with the local authority to match the approach taken across Luton and allow for directly comparable bias adjustment and results.

Assessment of monitoring against ES results

- 9.2.7 The air quality modelling results are based on traffic modelling and future year predictions of emission factors and as such there is an inherent level of uncertainty in the results. This uncertainty is managed, as detailed in **Chapter 7 Air Quality of the ES [TR020001/APP/5.01]** through the conservative use of background concentrations and model verification. The GCG Framework proposes an initial review in 2027 to assess if the annual concentrations measured are higher than the modelled concentrations in that location. This review process is then repeated every five years. Should it be identified that there is an increase in actual emissions compared to modelled emissions, the Outline Operational Air Quality Plan (an Outline of which is provide as **Appendix 7.5 [TR020001/APP/5.02]**) will be revisited and, where practicable, strengthened to help drive emission reductions.

Air Quality Reporting

- 9.2.8 Monitoring data for each location and each pollutant will be provided along with details of the quality assurance process, any bias adjustment or annualisation (if required).
- 9.2.9 Where further detailed analysis of results is required (for example to determine the cause of an exceedance) this will be detailed in a technical report for review by the Environmental Scrutiny Group, as defined under **GCG [TR020001/APP/7.07]**.
- 9.2.10 The airport operator will make underlying air quality data available on a confidential basis at the reasonable request of the Environmental Scrutiny Group.

¹ MCERT is the Environment Agency's monitoring Certification Scheme for equipment.

10 UNEXPECTED ARCHAEOLOGICAL DISCOVERIES DURING CONSTRUCTION ACTIVITIES

- 10.1.1 In the event of unexpected significant archaeological discoveries being made during construction activities, where no archaeological mitigation works are being undertaken in accordance with this CHMP or SSWSI, the archaeological remains must be retained in situ and reported by the ACoW to the relevant planning authority as soon as reasonably practicable from the date they are identified.
- 10.1.2 No construction operations are to take place within 10 metres of the remains for a period of 14 days from the date of any notice served unless otherwise agreed in writing by the relevant local planning authority in consultation with Historic England, as applicable.
- 10.1.3 If the local planning authority determines in writing that the archaeological remains require further investigation, no construction operations are to take place within 10 metres of the remains until provision has been made for the further investigation and recording of the remains in accordance with details set out in a SSWSI which will be submitted to, and approved in writing by, the relevant local planning authority in consultation with Historic England, as applicable.
- 10.1.4 The SSWSI will be prepared by the ACoW or the Archaeological Contractor. It will set out the methodology for the detailed recording of the archaeological remains. Under these circumstances, the remains will be protected from damage and the Applicant or the Applicant's lead contractor and the ACoW will liaise with the Archaeological Contractor to estimate and agree the additional time and resources needed to complete the archaeological investigation.
- 10.1.5 Should human remains be discovered during construction activities where no archaeological mitigation works are being undertaken, the remains will be covered and protected and left in-situ in the first instance, in accordance with current best practice. All works within the vicinity of the relevant area will stop until the remains have been removed. The Applicant or the Applicant's lead contractor will notify the H.M. Coroner with details of the remains immediately. The Applicant or the Applicant's lead contractor and the ACoW will liaise with the appointed Archaeological Contractor in order to determine the appropriate mitigation strategy and to estimate the additional time and resources needed. The strategy will be agreed with the relevant Archaeology Advisor for CBC and/or HCC. The removal of any human remains will take place in accordance with the requirements set out in Schedule 2 of the Draft DCO **[TR020001/APP/2.01]**.

11 ADVERSE GROUND CONDITIONS

- 11.1.1 Ground conditions at archaeological sites will be reviewed daily and monitored by the ACoW and the Archaeological Contractor. During adverse conditions, such as prolonged wet weather, it may be necessary to suspend temporarily archaeological work or activities, in order to preserve archaeological remains or to prevent potential damage until conditions improve.
- 11.1.2 The Applicant or the Applicant's lead contractor will be informed by the ACoW of which sites are affected, the reason(s) and likely duration of the interruption and delay, and whether any remedial actions are necessary or are planned (e.g. use of protective shelters or covers to protect exposed archaeological remains during episodes of wet weather, frost etc.). Resumption of work will be agreed between the ACoW, the Applicant's lead contractor and the Archaeological Contractor. The ACoW will notify the Archaeology Advisor for CBC and/ or HCC of any delay and revisions to programme.

12 INTEGRATED ENVIRONMENTAL PROCEDURES TO PROTECT THE HISTORIC ENVIRONMENT

- 12.1.1 The Applicant's lead contractor will minimise construction dust and fumes, noise and vibration by complying with the embedded mitigation measures set out in **Chapter 7 Air Quality** and **Chapter 16 Noise and Vibration** of the ES **[TR020001/APP/5.01]** and the control measures for construction air quality and construction noise and vibration set out in the CoCP provided as **Appendix 4.2** of the ES **[TR020001/APP/5.02]**.

13 SECURITY FOR ARCHAEOLOGICAL SITES

- 13.1.1 During the detailed excavation of the Roman building remains (HER 10808), and for any other important archaeological site that may be identified as a result of additional trial trenching and unexpected archaeological discoveries, the Applicant or the Applicant's lead contractor will provide adequate security measures to prevent out of hours unauthorised access to sites that may result in damage or theft.

14 INDUCTION, BRIEFING PROCEDURES AND TRAINING

- 14.1.1 The Archaeological Contractor's staff involved in the project are required to have Construction Skills Certification Scheme cards appropriate to the trade/ position, with all site supervisors having Site Supervisors Safety Training Scheme (or EU equivalent) certification.
- 14.1.2 For those roles where no suitable recognised competence standards exist, the Archaeological Contractor will provide information on the selection criteria and method used to provide assurance of an individual's competence. These may include appraisals of performance or competence and any relevant training and experience.
- 14.1.3 The Applicant's lead contractor will provide a site induction for the Archaeological Contractor's staff and their sub-contractors.
- 14.1.4 Notwithstanding the briefings provided by the ACoW, the Applicant's lead contractor will also provide Tool Box Talks to inform all site personnel of the archaeological and historic environment constraints on site, the protection measures that are required and their obligations under the CoCP.
- 14.1.5 The Applicant's lead contractor will develop, deliver and document a specific training programme for their staff and sub-contractors in order to:
- a. Ensure all staff and sub-contractors are aware of and adhere to their obligations under the CoCP; and
 - b. Provide training and briefing procedures to ensure all staff and sub-contractors receive an adequate introduction to the environmental aspects of the project in order to avoid environmental damage.

15 ARCHAEOLOGICAL CONTRACTOR'S DELIVERABLES

15.1.1 Following the completion of each stage of archaeological works, the Archaeological Contractor will prepare a level of fieldwork reporting that is commensurate with the fieldwork results. The types of archaeological fieldwork reporting are set out below and will be detailed, along with a delivery programme that has been agreed with the relevant local authority Archaeology Advisor, in the Archaeological Contractor's approved SSWSI.

15.2 Interim Report

15.2.1 Within four weeks of the completion of a programme of archaeological fieldwork, an interim report will be submitted by the Archaeological Contractor to the relevant local authority Archaeology Advisor, the Applicant and the ACoW. The interim report will include as a minimum:

- a. a summary of the fieldwork results;
- b. a site location plan; and
- c. a quantification of the primary archive including contexts used, finds and samples.

15.3 Fieldwork Reporting Types

15.3.1 The results of the fieldwork, depending on the importance, may require either a fieldwork report or a more detailed stage of post-excavation assessment, analysis and publication.

Fieldwork Report

15.3.2 If the Archaeological Contractor, ACoW and the relevant local authority Archaeology Advisor decide that the fieldwork results are not important enough to warrant detailed analysis and publication, then a Fieldwork Report will be produced.

15.3.3 The content and scope of the Fieldwork Report shall be undertaken in accordance with this CHMP and current good practice and guidance and will contain the following information:

- a. title page or cover sheet giving key project details;
- b. a signed Quality Assurance sheet detailing as a minimum - title, author, version, date, checked by, approved by;
- c. a non-technical summary;
- d. a site location drawing;
- e. the archaeological and historical background (including the results of previous phases of fieldwork);
- f. the methodology employed for the mitigation works;
- g. the aims and objectives of the mitigation works;

- h. the results of the mitigation works (to include full description, assessment of condition, quality and significance of the remains);
- i. if human remains are encountered the report will include a statement that addresses the future retention of the material, including if appropriate, options for reburial;
- j. an appendix containing specialist artefact reports, palaeoenvironmental reports or their equivalent;
- k. an appendix illustrating specific finds and general working shots or portraits of specific features or structures as appropriate;
- l. a list of all finds that fall within the scope of the Treasure Act and associated legislation;
- m. a stratigraphic matrix for each area (as appropriate);
- n. a statement of the significance of the results in their local, regional and national context cross-referenced to the Regional Research Framework;
- o. the proposed arrangements for long-term conservation and archive storage (including details of the accredited repository details);
- p. general and detailed plans showing the location of the survey area accurately positioned on an Ordnance Survey base map (at an appropriate and recognised scale);
- q. detailed plans and sections illustrating archaeological features and relationships between features (at an appropriate and recognised scale);
- r. colour photographic plates illustrating the site setting, work in progress and archaeological discoveries; and
- s. a cross-referenced index of the project archive.

15.3.4 The Archaeological Contractor will submit a copy of the draft report to the relevant local authority Archaeology Advisor, the Applicant and the ACoW for comment. In finalising the report, the comments received will be taken into account.

15.3.5 The draft Fieldwork Report will be submitted for comment within six weeks of the completion of the archaeological fieldwork. The final Fieldwork Report will be submitted to the relevant local authority Archaeology Advisor, the Applicant and the ACoW within ten weeks of the completion of the archaeological fieldwork.

Post-Excavation Assessment Report, Updated Project Design and Publication

15.3.6 If the results of the fieldwork are of sufficient significance to warrant publication, the deliverable, following on from the interim report, may take the form of a Post-excavation Assessment Report and will include an Updated Project Design (UPD) in accordance with the guidance and standards set out in Historic England's Management of Research Projects in the Historic Environment (Ref. 8). The report will incorporate and reference all the results from all other phases

of archaeological work that have been undertaken for the Proposed Development.

- 15.3.7 The Post-excavation Assessment Report and UPD will be submitted to the relevant local authority Archaeology Advisor, the Applicant and the ACoW within six months of the completion of the archaeological fieldwork. As a minimum the Post-excavation Assessment Report and UPD will present:
- a. a summary of the project background, original aims and objectives;
 - b. an integrated description of the results by period for each area of archaeological mitigation;
 - c. a quantification of each artefact and ecofact type recovered during the mitigation works;
 - d. an assessment of how the results of the archaeological mitigation address the original and any new research objectives;
 - e. a proposal for a revised set of research objectives;
 - f. recommendations for further analysis and publication (if relevant to the investigation results); and
 - g. a detailed task list and programme for analysis and publication (if relevant to the investigation results).
- 15.3.8 If detailed analysis and publication are recommended by the UPD, a stage of post-excavation analysis and publication will be required. The post-excavation analysis stage of the project will comprise the detailed quantification, analysis and reporting of the recorded archaeological remains (contextual records), artefacts and ecofacts recovered during the programme of archaeological mitigation. The post-excavation analysis will be undertaken by the Archaeological Contractor supported by external specialists as appropriate.
- 15.3.9 The programme for analysis and publication will be agreed with the ACoW, the Applicant and the relevant local authority Archaeology Advisor.
- 15.3.10 The format of any publication shall be commensurate with the heritage significance of the archaeological results and will be agreed with the ACoW, the Applicant and the relevant local authority Archaeology Advisor. Online publication formats as well as traditional publication formats will be considered.
- 15.3.11 If the results merit it, a popular publication report and illustrated document explaining the results in layman's terms should be produced. The popular report should inform the non-expert audience about the discoveries and their significance in an accessible manner. Popular booklets may be produced both for children and for adult audiences.

GLOSSARY AND ABBREVIATIONS

Term	Definition
ACoW	Archaeological Clerk of Works
CBC	Central Bedfordshire Council
CHMP	Cultural Heritage Management Plan
CIfA	Chartered Institute for Archaeologists
CoCP	Code of Construction Practice
GCG	Green Controlled Growth
HCC	Hertfordshire County Council
SSWSI	Site-specific Written Scheme of Investigation
STEM	Science, Technology, Engineering and Mathematics
UPD	Updated Project Design
WSI	Written Scheme of Investigation

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ANNEX A: HERITAGE STANDARDS AND GUIDANCE

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Appendix A – Figure



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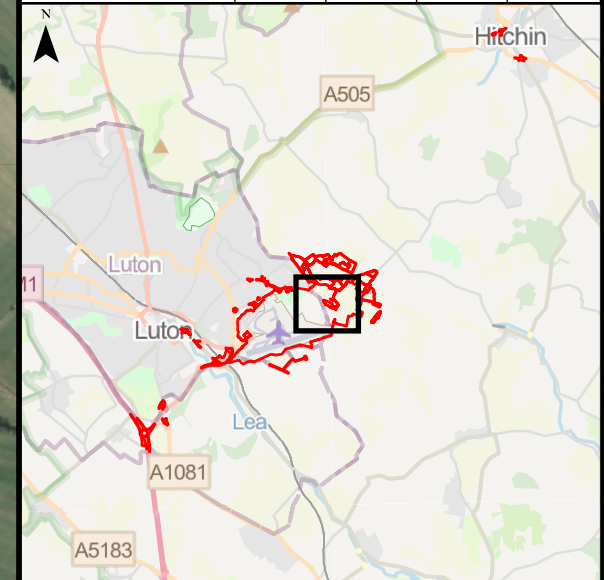
All structure positions are indicative. The proposed works will be subject to detailed design development. The changes will be within limits of deviation specified in the Development Consent Order.

Legend

- Local Authority Boundaries
- Archaeological Alert Area
- Area for Detailed Excavation
- Additional Trial Trenching
- Trenches Completed for the Proposed Development
- Targeted Watching Brief Zone
- High Pressure Fuel Main
- Utility Exclusion Zone (50m either side of centre line)

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Revision History	Drawn	Checked	Approved	Date	Rev.



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**London Luton Airport Expansion
 Development Consent Order**

Drawing Title
**Figure 1
 Cultural Heritage Management Plan Requirements**

Purpose of issue SUITABLE FOR INFORMATION				Suitability S2	
Drawn MAB	Checked AC	Approved CS	Date 22/02/23	Scale 1:5,000	Size A3

DCO Application Ref. TR020001	APFP Regulation APFP 5(2)(a)	DCO Document Ref. TR020001/APP/5.02
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Project - Phase - Originator - Asset/Zone - Sub Asset - Type- Discp. - Number