M5 Junction 10 Improvements Scheme

Environmental Management Plan

Annex B.10 Operational Unexploded Ordnance Emergency Response Plan

TR010063 – APP 9.24

Regulation 5 (2) (q)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

Volume 9

November 2024

Gloucestershire COUNTY COUNCIL

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Infrastructure Planning

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Development Consent Order 202[x]

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Regulation Number:	Regulation 5 (2) (q)
Planning Inspectorate Scheme Reference	TR010063
Application Document Reference	TR010063/APP/9.24
Author:	M5 Junction 10 Improvements Scheme Project Team

Version	Date	Status of Version
Rev 0	May 2024	Response to Rule 9
Rev 1	November 2024	Deadline 10

Contents

Chapter Page

Tables

Figures

B10. Operational Unexploded Ordnance Emergency Response Plan

B10.1. Introduction

Purpose

B10.1.1. This document forms Annex B.10 of the Environmental Management Plan (EMP) (Application document TR010063/APP/7.3). Annex B.10 is an Operational Unexploded Ordnance (UXO) Emergency Response Plan (ERP) (1st iteration) for the M5 Junction 10 Improvements Scheme (the Scheme). This Plan (1st iteration) will be updated by the appointed Principal Contractor (PC) into an Operational UXO ERP (2nd iteration), as required by Requirement 3 of the DCO, prior to commencement of works.

B10.1.2. The purpose of this Operational UXO ERP is to detail the procedures to be followed in the event of a suspected or real UXO being discovered.

B10.1.3. This is a live document based on the Contractor's HSE Emergency Preparedness Response plan STD-HSS-H04 and will be reviewed and updated as required as the Scheme progresses.

Structure of the operational unexploded ordnance response plan

B10.1.4. This Operational UXO ERP includes:

- Section B.10.1: provides an introduction, description of the purpose of this document and roles and responsibilities in its implementation.
- Section B.10.2: provides a site risk assessment for the likelihood of the presence of unexploded ordinance.
- Section B.10.3: provides an emergency response plan to be followed in the event of a suspected or real UXO being discovered.
- Section B.10.4: confirms the follow-on activities to be completed once a UXO is safely dealt with.

Project team roles and responsibilities

B10.1.5. Key roles and those responsible are summarised in Table B 10-1 below.

Table B 10-1 Operational UXO ERP Roles and Responsibilities During Construction

Position	Name and Contact Number	Responsibility
Client Project Manager	GCC	Approval of methods and procedures implemented by the Principal Contractor
Principal Contractor **Project Manager**	TBC	Approval for sign-off of the Operational UXO ERP for the relevant phase of works. Ensures that all controls specified are implemented by employees and sub-contractors. Ensures the Principal Contractor always has sufficient appropriately trained staff on site to ensure the effective implementation of the ERP and that adequate arrangements

Position	Name and Contact Number	Responsibility
		have been made with the public emergency services to enable them to respond in an appropriate manner to any potential UXO incident.
Principal Contractor **Health & Safety Manager**	TBC	Ensures a suitably robust Operational UXO ERP is prepared and up to date. Ensures the potential risks from encountering UXO have been suitably addressed including the possible risks to off-site receptors. Ensures any construction phase UXO risk mitigation requirements (including emergency plans) are implemented correctly, briefed to all site personnel and information handed to subcontractors. Ensures the relevant information is displayed on notice boards around the site. Ensures all parties working on the site are Site Inducted and briefed on the likelihood of locating a UXO with diagrams and images for identification purposes. Ensures all Task Briefings are in line with the UXO Emergency Response Plan Carries out emergency drills and checking of equipment every 6 months, where relevant / required.
Fire Co-ordinator	TBC	Checks the emergency response plan with the Health and Safety Manager. Organising drills, where relevant / required. Acts as a point of contact for the emergency services and UXO / UXB team.
Section Works Manager	TBC	Acts as a point of contact for the gangers and foreman. Pass information up the line to the Fire Co-ordinator and PM. Secure the area, run roll call for the area and get all staff out of the exclusion zones to a safe distance. Control exclusion zones with help from team. Engage with TM team to close roads if required.
Subcontractors	TBC	Provide the Principal Contractor with any information relating to their work that might affect health and safety. This will include information relevant to any changes in site practices or site conditions that may impact on potential risk from UXO. Comply with directions from the Principal Contractor's UXO ERP and attend briefings when required. Produce relevant documentation such as a Safe System of Work (SSOW), taking into account the ERP requirements for the site, to be checked by the Principal Contractor to ensure they are adequate. All employers with employees working on or visiting the site at which there is a reasonably foreseeable risk from UXO will receive a site induction which will include a briefing of the risks, how to identify a UXO/UXB and the ERP process.

B10.2. Site risk assessment

B10.2.1. The Scheme is situated to the north-west of Cheltenham and north-east of Gloucester, both of which had multiple Luftwaffe targets during WW2 due the industry, military and airfield presence in the area.

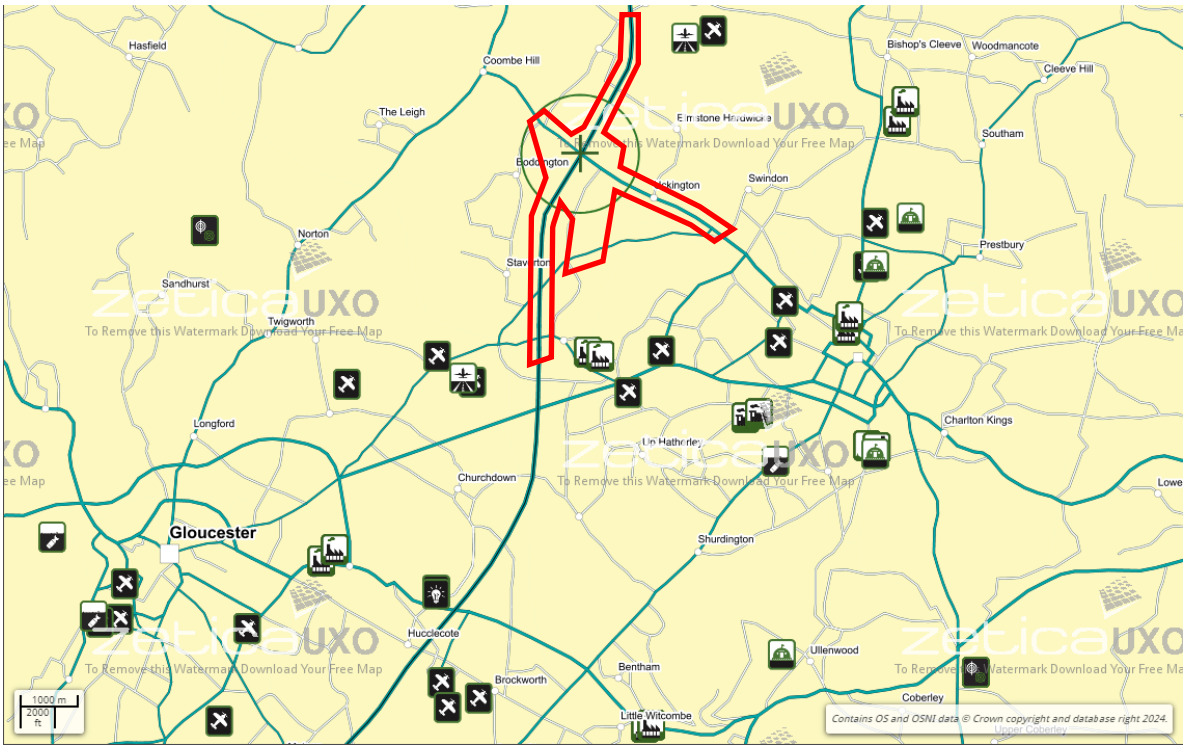

Figure B 10-1 - Overview of Luftwaffe targets during WW2, with indicative Scheme Order limits

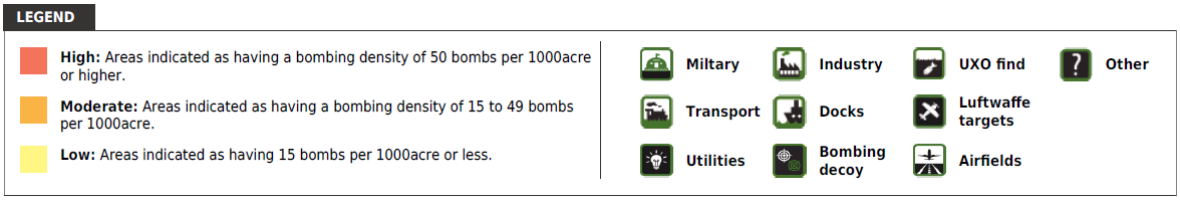

Figure B 10-2 - Zetica Legend

B10.2.2. Nonetheless, no Luftwaffe targets have been identified within the site boundary:

This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

Figure B 10-3 - Zetica UXO search return within Scheme area

This map principally indicates a hazard from Unexploded Bombs (UXB) due to WWII bombardment. Other sources of Unexploded Ordnance (UXO) may be present. It should be noted that this map does not represent UXO risk and should not be reported as such when reproduced.

Figure B 10-4 - Zetica UXO search return within Scheme area

B10.2.3. A preliminary risk assessment completed by Zetica concludes that no pre-WWI, WWI or post-WWI military activity has been identified on or affecting the site. In addition, no WWI bombing has been identified within the Scheme limits. Please refer to Appendix A.

B10.2.4. A detailed UXO Threat and Risk Assessment will be procured by the Contractor prior to the start of construction to better inform this ERP.

B10.3. Emergency response plan

B10.3.1. This plan provides clear and precise guidance on what to do should suspected UXO be encountered and / or initiated as part of the site works. This will be clearly communicated to the operational site staff and briefed accordingly.

B10.3.2. All personnel working on the Scheme shall receive a Site Induction referencing the site potential hazards and a Toolbox Talk briefing on the identification of UXO and actions that will be taken should an object be found. This information shall be held on site, be communicated in pre-start briefings and displayed on site notice boards.

Emergency contacts

B10.3.3. Emergency contact details are provided below.

B10.3.4. Table B 10-2 will be updated prior to construction.

Table B 10-2 Emergency Contacts

Name	Role and Company	Telephone No.
N/A	Emergency Services	TBC
TBC	Senior Project Manager Gloucestershire County Council	TBC
TBC	Project Director Principal Contractor	TBC
TBC	Senior Works Manager Principal Contractor	TBC
TBC	Health & Safety Manager Principal Contractor	TBC
TBC	Fire Co-ordinator Principal Contractor	TBC
TBC	M5 Section Project Manager Principal Contractor	TBC
TBC	A4019 Section Project Manager Principal Contractor	TBC
TBC	Link Road Section Project Manager Principal Contractor	TBC
TBC	Explosive Ordinance Engineer (EOD) TBC	TBC

On the discovery of potential UXO

B10.3.5. Figure B 10-5 provides the emergency response plan for the discovery of potential UXO. The plan shall be reviewed and updated at least quarterly as works progress.

B10.3.6. The Principal Contractor shall operate a permit to break ground system for all works that will disturb the ground.

B10.3.7. On discovery of a suspected UXO, works are to cease, an alarm sounded to alert everyone, staff moved to a safe distance and the area secured to prevent access. These measures will need to be briefed at start of works to ensure all operational staff are aware of their responsibilities.

B10.3.8. The Section Project Manager and Senior Works Manager should then be notified. If safe to do so, a photograph should be taken to send to the EOD engineer for assessment or to a relevant emergency services party. The size of the exclusion zone shall be determined by site conditions and the suspected nature of the object.

B10.3.9. Upon assessment of the photo, the EOD engineer will advise as to whether they will attend site to make further checks or inform the Section Project Manager to call the emergency services. (In the event a photo cannot be taken a phone conversation will take place with the EOD engineer describing the object and assessment given).

B10.3.10. If road closures are deemed necessary to contain the potential exclusion zone, then the traffic management provider will assist the emergency services to set these out. Emergency services may need to provide rolling roadblocks to stop traffic as a temporary measure until road closures can be put in place.

B10.3.11. The Section Works Managers will be prepared to provide briefings to the emergency services and, if required, to local residents. The Fire Co-ordinator will supervise the exclusion zone to ensure that no one re-enters the cordoned off area. Any potential UXO's are to be treated as having the potential to detonate until proven otherwise by a competent UXO expert.

B10.3.12. The suspected UXO must be secured/monitored to ensure it is not disturbed further until competent Explosive Ordnance Clearance (EOC) or Disposal (EOD) personnel can make positive identification/assessment. The following steps will be undertaken:

- The EOD consultant should be contacted to make an assessment as to the nature of the suspected UXO.
- If the suspect item is deemed non-UXO, the safety cordon, including any road closures, can be lifted and works may proceed.
- If deemed potential UXO, the Emergency Services EOD team will mobilise to site to undertake further examination.
- On examination, if the potential UXO proves to be non-hazardous/inert, it will be removed by the EOD team as ordnance scrap.
- If the potential UXO is considered hazardous, the EOD team will undertake a disposal operation.
- Liaison with local authorities will be undertaken once the EOD team has been tasked and they will be informed that a disposal operation is taking place and be advised whether any further measures are required. In the unlikely event that an evacuation is required, the local authorities will have a key role in facilitating this.
- Once the disposal operation is complete, the EOD team will provide an all clear which will be communicated to all stakeholders and any safety cordons will be lifted.
- Following the discovery of an unexpected UXO, a review of the area and an assumption must be made that other UXO may be present.

B10.3.13. Emergency drills identified in the workplace's emergency response plan should be tested at 6-month intervals. The findings of any drills should be recorded, communicated to the site team and drill procedures reviewed as necessary.

B10.3.14. Where equipment is required as part of the emergency response, it should be inspected at 6-month intervals and be regularly maintained, with records of inspections and maintenance kept by the Health and Safety Manager.

B10.3.15. The workplace's emergency notice board will display information relating to who is responsible in the event of a potential UXO discovery and how to contact them. This should be updated, particularly during periods of planned and unforeseen absence, to ensure cover is in place and briefed regularly.

B10.4. Follow-on activities

B10.4.1. Following an unexpected find, a review of the area and works should be undertaken based on the assumption that other UXO may be in the area.

B10.4.2. If it has been identified that further UXOs are likely, then a specialist UXO contractor should be brought in to assist with the safe operations.

B10.4.3. An on-call explosive ordnance specialist shall be retained to identify UXO and to provide advice on the appropriate course of action in the event of suspected or identified UXO finds.

B10.4.4. Following an unexpected find, a member of the Site Management Team is to notify the following personnel and provide an update as the situation develops:

- Principal Contractor Construction Manager
- Principal Contractor Health and Safety Manager
- Gloucestershire County Council Senior Project Manager.

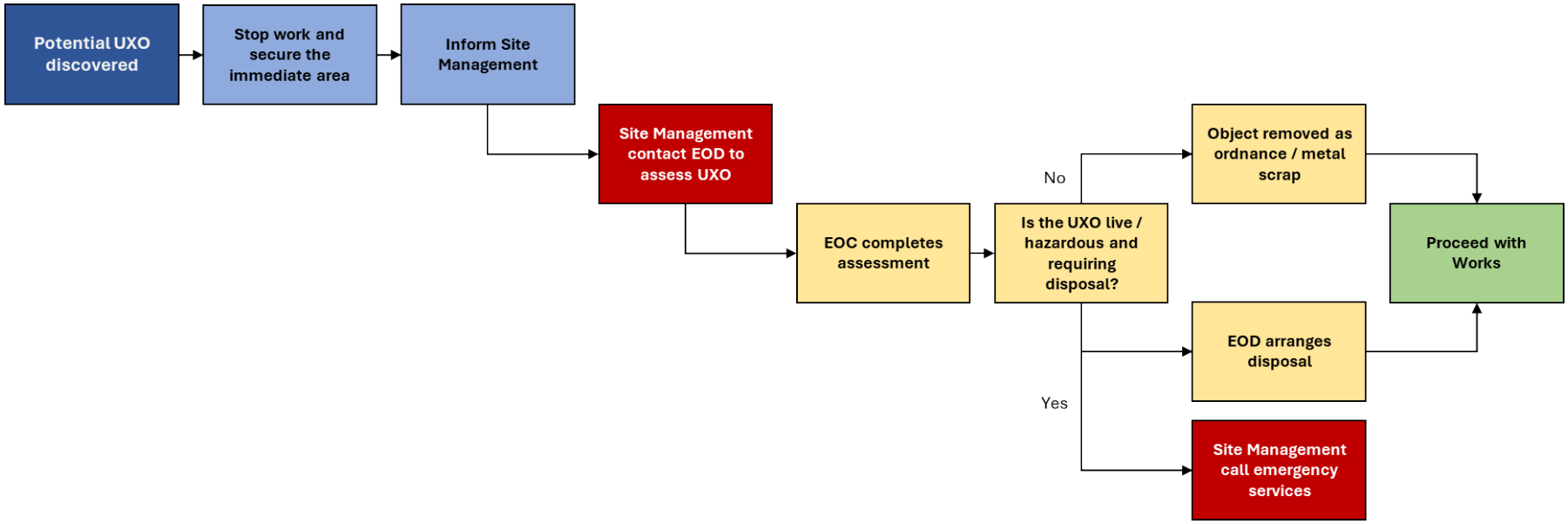

Figure B 10-5 - UXO ERP flow diagram

Appendices

Appendix A.

A.1. Zetica Preliminary Risk Assessment

A.1.1. Appendix section 1.1

Pre-Desk Study Assessment	
Site:	Land off Withy Bridge, Cheltenham, Gloucestershire
Date:	7th May 2024
Pre-WWI Military Activity on or Affecting the Site	None identified.
WWI Military Activity on or Affecting the Site	None identified.
WWI Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: o Transport infrastructure and public utilities. o Industries important to the war effort, including aircraft manufacturing and engineering and metal works. o Military barracks, camps, depots, and training areas.
WWI Bombing	None identified on the Site.
Interwar Military Activity on or Affecting the Site	None identified on the Site. Royal Air Force (RAF) Staverton was established approximately 0.5km southwest of the Site. It was a training airfield.
WWII Military Activity on or Affecting the Site	Anti-Aircraft (AA) and anti-invasion defences, including 1No. Heavy AA (HAA) battery and 1No. searchlight battery, were established on the Site. RAF Staverton remained in use for training.
WWII Strategic Targets (within 5km of Site)	The following strategic targets were located in the vicinity of the Site: o Transport infrastructure and public utilities. o Industries important to the war effort, including aircraft manufacturing and engineering and metal works. o RAF Staverton and RAF Stoke Orchard. o Military barracks, camps, depots, and training areas. o AA and anti-invasion defences.

WWII Bombing Decoys (within 5km of Site)	1No. located approximately 2.6km northeast of the Site.
WWII Bombing	During WWII the Site was located in the Rural District (RD) of Cheltenham, close to the Municipal Borough (MB) of Cheltenham. Cheltenham RD officially recorded 185No. High Explosive (HE) bombs with a bombing density of 2.3 bombs per 405 hectares (ha). Cheltenham MB officially recorded 64No. HE bombs with a bombing density of 12.4 bombs per 405ha. No readily available records have been found to indicate that the Site was bombed.
Post-WWII Military Activity on or Affecting the Site	None identified on the Site. RAF Staverton closed in 1951.
Recommendation	It is recommended that a detailed desk study is commissioned to assess, and potentially zone, the Unexploded Ordnance (UXO) hazard level on the Site.
Further information	For information about Zetica's detailed UXO desk studies and other UXO services, please visit our website: [redacted] Details and downloadable resources covering the most common sources of UXO hazard affecting sites in the UK can be found [redacted] If you have any further queries, please don't hesitate to get in contact with us at [redacted]
This summary is based on a cursory review of readily available records. Caution is advised if you plan to action work based on this summary. It should be noted that where a potentially significant source of UXO hazard has been identified on the Site, the requirement for a detailed desk study and risk assessment has been confirmed and no further research will be undertaken at this stage. It is possible that further in-depth research as part of a detailed UXO desk study and risk assessment may identify other potential sources of UXO hazard on the Site.	

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