

# A47/A11 Thickthorn Junction

**Scheme Number: TR010037**

**Volume 6**

## **6.3 Environmental Statement Appendix** **Appendix 9.4 – Assessment of risk to** **construction workers**

APFP Regulation 5(2)(a)

Planning Act 2008

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

March 2021

Infrastructure Planning

Planning Act 2008

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

The A47/A11 Thickthorn Junction  
Development Consent Order 202[x]

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**ENVIRONMENTAL STATEMENT APPENDIX**  
**Appendix 9.4 – Assessment of risk to construction workers**

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## Appendix 9.4 Assessment of risk to construction workers

### 9.1. Introduction

- 9.1.1. Human health risks to construction workers during the construction of the scheme have been assessed in this appendix. Risks to construction workers have not been discussed in the main chapter section due to construction workers being temporary receptors, and the risk to construction workers, as required by The Construction (Design and Management) Regulations 2015, will only be undertaken with an acceptable level of risk. Therefore, construction workers do not need to be considered in the assessment of environmental impact for the Proposed Scheme.
- 9.1.2. However, the risk to construction workers should still be assessed as construction workers are a potential human health receptor during the construction of the Proposed Scheme.
- 9.1.3. The assessment methodology and criteria are discussed in ES Chapter 9 Geology & Soils (TR010037/APP/6.1).

### 9.2. Contamination Assessment

- 9.2.1. The following assessment was undertaken and informed by the findings of a 2018 ground investigation.

#### *Potentially active contaminant linkages*

- 9.2.2. The potential active contaminant linkages relating to construction workers for the Proposed Scheme are summarised in Table 9-1 below.

Table 9-1: Potentially active contaminant linkages

Source	Pathway	Receptor
Source 1: Cantley lane Landfill and Source 2: Infilled Gravel pit	Direct contact with soils/dusts Inhalation or ingestion of soils/dusts Inhalation of gas	Construction workers
Source 3: Petrol Filling Station on Adjacent Site	Inhalation of vapours	Construction workers

### Human health - potential contaminant linkages

- 9.2.3. Construction workers (during the building of the road and infrastructure), are considered to be potential receptors via dermal contact, inhalation or digestion of soil, soil dust, ground gases or vapours.
- 9.2.4. The generic risk assessment which was undertaken on the available soil data did not identify any unacceptable risks to human health from the soils on the Proposed Scheme.
- 9.2.5. The ground gas and soil vapour risk assessments did not identify any unacceptable risks to human health from ground gas. However, data gaps have been identified as discussed in ES Chapter 9 Geology & Soils (TR010037/APP/6.1).

## 9.3. Potential land contamination impacts

- 9.3.1. The following construction phase activities have the potential to result in an adverse impact to human health:
- ground disturbance on top of and within close proximity to the infilled gravel pit on the south east of the proposed scheme which could lead to the disturbance of potentially contaminated materials
  - earthworks within or in close proximity to the Cantley Lane landfill or the infilled gravel pit which could lead to increased ground gas risk to construction workers
  - importation of unsuitable materials which have the potential to introduce new sources of contamination
  - storage of excavated made ground soils in stockpiles which could lead to the release of contamination

### Determination of magnitude of potential impact

- 9.3.2. The magnitude of potential impacts has been determined based on the baseline conditions identified and are presented in Table 9-2

Table 9-2: Determination of the magnitude of potential impact

Receptor	Sensitivity and magnitude	Reasoning
Construction workers	High sensitivity Moderate adverse magnitude	Human health receptors will be present during earthworks within made ground materials.  No significant risks have been identified to Human Health from soils or ground gas on the Proposed Scheme, however the presence of the Cantley Lane landfill and the infilled gravel pit on the south east of the study area may require control or remediation measures to be employed during construction works.  The current assessment of magnitude has been made using a precautionary approach and assumes that contaminated land will be

Receptor	Sensitivity and magnitude	Reasoning
		<p>identified within the additional ground investigation works which has the potential to impact on construction workers.</p> <p>The magnitude of the impact should be reviewed following additional preconstruction ground investigation within the landfill and infilled gravel pit.</p>

## Mitigation measures

9.3.3. The implementation of an Environmental Management Plan (EMP) (**TR010037/APP/7.4**) will set out controls to ensure that all identified environmental risks are appropriately managed and minimised. Mitigation measures within the EMP will include best practice environmental management procedures and appropriate waste management, such as:

- protection of watercourses from entry of polluting matter
- suppression of odour and dust using best practice measures.

9.3.4. Made ground underlies areas of the Proposed Scheme, and localised areas of infilled ground are also present. Management of any potential risks associated with made ground or infilled ground will be undertaken in accordance with good practice including:

- monitoring of potential ground-gases and vapours in confined spaces during construction
- requirements for suitable personal protective equipment and hygiene practices for construction and maintenance workers working on brownfield sites.

## 9.4. Assessment of likely significant residual effects

9.4.1. The residual effects on the identified receptors have been determined as presented in Table 9-3. The significance of effect has been determined using Table 3.8.1 of DMRB 104.

Table 9-3: Determination of residual effects significance.

Receptor	Summary of effects	Mitigation measures	Significance category
Construction workers	Earthworks in contaminated soil and/or in close proximity to ground which could generate significant quantities of ground gas.	<p>Inclusion of a Materials Management Plan (MMP) which identifies contaminated materials and appropriate management strategies to manage working with contaminated materials.</p> <p>Use of best practice measures for earthworks including dust management strategies for the handling and storage of contaminated materials.</p>	<p><b>Receptor sensitivity:</b> High</p> <p><b>Magnitude:</b> Moderate adverse</p> <p><b>Significance:</b> Moderate</p>

Receptor	Summary of effects	Mitigation measures	Significance category
		Health and safety measures for working with contaminated land including appropriate PPE and hand washing facilities.  Ground gas risk assessment and management strategies for working in confined spaces and excavations.	<b>Duration:</b> Temporary

## 9.5. Monitoring

9.5.1. If any previously unidentified contaminated land is encountered during the monitoring of earthworks then a suitably experienced and qualified specialist should be notified and appropriate actions taken to assess and address any associated risks. Actions may include:

- sampling and assessment of soils to understand risk to construction workers
- remediation of unsuitable materials either by on-site treatment, off-site treatment, or off-site disposal
- assessment of mitigation strategies to enable contaminated soils to be re-used without presenting a risk to construction workers during the handling on placement of material