

# A428 Black Cat to Caxton Gibbet improvements

TR010044

Volume 6

6.3 Environmental Statement

Appendix 10.1: Minerals Safeguarding Report

Planning Act 2008

Regulation 5(2)(a)

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

26 February 2021

Infrastructure Planning

Planning Act 2008

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

**A428 Black Cat to Caxton Gibbet  
improvements  
Development Consent Order 202[ ]**

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**Appendix 10.1: Minerals Safeguarding Report**

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<b>Regulation Number</b>	Regulation 5(2)(a)
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# 1 Introduction

## 1.1 Scheme location and surroundings

- 1.1.1 The Scheme is located within the following administrative boundaries:
- Bedford Borough Council (Unitary Authority in Bedfordshire).
  - Central Bedfordshire Council (Unitary Authority in Bedfordshire).
  - Cambridgeshire County Council (County Council).
  - Huntingdonshire District Council (non-metropolitan district in Cambridgeshire).
  - South Cambridgeshire District Council (non-metropolitan district in Cambridgeshire).
- 1.1.2 The existing A428 connects communities between St Neots and Cambourne and links the East of England to important regional, national and international hubs such as the Felixstowe and Harwich ports. The route also connects Bedford, Milton Keynes and the M1 motorway to Cambridge and the M11 motorway, and is used by both local and long-distance traffic.
- 1.1.3 The existing A428 connects into the A1 Great North Road (A1) at the Wyboston interchange approximately 2 kilometres (1.2 miles) north of the existing Black Cat roundabout and runs in a broadly east – west direction for approximately 17 kilometres (10.6 miles) before connecting into the existing Caxton Gibbet roundabout, south of Papworth Everard.
- 1.1.4 The Scheme passes through an area predominantly characterised by agriculture, comprising a pattern of agricultural fields and pockets of plantation woodland framed by a network of hedgerows and farm access tracks.
- 1.1.5 In Cambridgeshire, the Scheme crosses a Mineral Safeguarding Area (MSA) for sand and gravel at Hen Brook (see Sheet 1 of **Figure 3**).
- 1.1.6 In Bedfordshire, the Scheme includes the majority of the Black Cat Quarry Strategic Mineral Site. The Scheme also extends into an MSA for sand and gravel associated with the River Great Ouse at the existing Black Cat roundabout (see Sheet 2 of **Figure 3**).
- 1.1.7 Except for the Black Cat Quarry Strategic Mineral Site, the Scheme does not affect any allocated mineral sites. Similarly, the Scheme does not affect any allocated borrow pits and neither is it within any Mineral Consultation Areas (MCAs). In addition, the Scheme is not within, or in the vicinity of any allocated sites or MCAs in emerging policy documents.

## 1.2 Mineral planning authorities

- 1.2.1 The Scheme crosses a number of local authority boundaries. Bedford Borough Council, Central Bedfordshire Council and CCC are the respective Minerals Planning Authorities (MPAs) along the route of the Scheme and as such are responsible for planning control of minerals development including minerals supply, minerals safeguarding areas, site allocations and determination of mineral planning applications within their respective boundaries.
- 1.2.2 Huntingdonshire District Council and South Cambridgeshire District Council are local planning authorities within Cambridgeshire. They are not MPAs but need to have regard to Mineral Safeguarding Areas (MSAs), site allocations and mineral planning applications when permitting development in their area.

## 1.3 Scoping

- 1.3.1 The Combined Bedfordshire Authorities (Bedford Borough Council and Central Bedfordshire Council ) provided a consultation response to the request for a Scoping Opinion on 1 May 2019 and are supportive of the Scheme in principle. In relation to minerals sites, the response states:

*“The central and southern parts of the operational Black Cat Quarry fall within the DCO site boundary. Given that mineral extraction at Black Cat Quarry is expected to cease in autumn 2019, the effective deadline for final restoration of the whole site will be Spring 2021. The future baseline environmental conditions that may be affected by the road project will therefore need to be based on the approved restoration and landscaping scheme (LPA planning reference 17/00462/AOC).”*

- 1.3.2 This approach has been adopted in the Environmental Statement (ES) **[TR010044/APP/6.1]** which assesses impacts on the basis that the Black Cat Quarry has been restored in advance of the Scheme's construction.
- 1.3.3 The Planning Inspectorate published its Scoping Opinion **[TR010044/APP/6.5]** on 13 May 2019. This did not mention mineral safeguarding issues.

## 1.4 Report content and structure

- 1.4.1 The objective of MSAs is to safeguard mineral resources from unwarranted sterilisation of potential mineral resources by non-mineral development.
- 1.4.2 The report considers the impacts of the Scheme on MSAs and allocated mineral sites in Bedfordshire and Cambridgeshire, in order to consider the Scheme's ability to comply with minerals planning policy for minerals safeguarding.
- 1.4.3 The remainder of this report is structured as follows:
- A summary of minerals safeguarding policy (Section 2).
  - A discussion of the need for the Scheme (Section 3).
  - An assessment of the mineral resource potentially affected by the Scheme, and the practicability and environmental acceptability of prior extraction (Section 4).

- d. An assessment of the impact of the Scheme on Strategic Mineral Sites (Section 5).
- e. An assessment of whether the policy tests in the NPSNN, the joint *Cambridgeshire and Peterborough Minerals and Waste Development Plan (MWDP) Core Strategy Development Plan Document (2011)* (Ref 1) and the joint **Bedford Borough Council, Central Bedfordshire Council** and Luton Borough Council *Minerals and Waste Local Plan: Strategic Sites and Policies (MWLP: SSP)* (2014) (Ref 2) are met (Section 6).
- f. Report conclusions (Section 7).

1.4.4 This report is supported by the following Figures:

- a. **Figure 1 Environmental and Planning Designations** in the vicinity of safeguarded mineral resources – including Overhead Cables, buildings, Scheduled Monuments, waterbodies and land at risk of flooding.
- b. **Figure 2 Mineral Extraction Constraints** using buffer zones, environmental and planning designations.
- c. **Figure 3 Minerals Safeguarding Areas** showing minerals safeguarding areas for sand and gravel where they cross the Order Limits and qualitative mineral extraction exclusion zones based on environmental and planning designations.
- d. **Figure 4 Geological Map: Black Cat Junction** shows an extract from the geological map.

## 2 Minerals policy

### 2.1 Introduction

- 2.1.1 When determining a Development Consent Order (DCO) application, the Planning Inspectorate is required to have regard to relevant National Policy Statements (NPS), as well as national and local planning policy.
- 2.1.2 The relevant NPS for the Scheme is the National Policy Statement for National Networks (NPSNN) (Ref 3). The Scheme also includes the diversion of a high-pressure gas pipeline (Cadent diversion) which has been treated as if is a Nationally Significant Infrastructure Project (NSIP) for the purposes of this DCO application (see the Explanatory Memorandum for further details [TR010044/APP/3.2]). However, as the Cadent diversion does not affect any MSAs, the NPS for Energy (EN-1) and the NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) have not been considered further in this report.
- 2.1.3 The relevant national and local planning policy documents which are considered to be material to the determination of the DCO application in relation to mineral resources are:
- National Planning Policy Framework* (NPPF) (Ref 4) as interpreted and explained in the associated Planning Practice Guidance (PPG) (Ref 5).
  - Cambridgeshire and Peterborough Minerals and Waste Development Plan: Core Strategy Development Plan Document* (MWDP) (DPD), adopted July 2011 (Ref 1).
  - Bedford Borough, Central Bedfordshire and Luton Borough Councils *Minerals and Waste Local Plan: Strategic Sites and Policies*, (MWLP:SSP) adopted January 2014 (Ref 2).
- 2.1.4 The Emerging Cambridgeshire and Peterborough Minerals and Waste Local Plan was prepared in November 2019 (Ref 6). On 24<sup>th</sup> of March 2020 the councils submitted the Local Plan to the government for examination by an independent planning inspector. The examination hearings took place in September 2020 and consultation on subsequent modifications to the Plan ended on the 15<sup>th</sup> December 2020. The plan is expected to be adopted during 2021
- 2.1.5 In addition, the following documents are considered relevant when considering minerals safeguarding policy:
- British Geological Survey (BGS): Mineral Safeguarding in England good practice advice* (2011) (Ref 7).
  - BGS: Mineral Resource Information in support of National, Regional and Local Planning Cambridgeshire (comprising Cambridgeshire and the City of Peterborough)* (2003) (Ref 8).
  - BGS: Mineral Resource Information for Development Plans Bedfordshire: Resources and Constraints* (1995) (Ref 9).
  - BGS: A Guide to Mineral Safeguarding in England* (2007) (Ref 10).

- e. Mineral Safeguarding Areas (Information provided by *BGS, Cambridgeshire County Council, Peterborough City Council and consultation*, (Updated November 2009) (Ref 11).

## 2.2 National Policy Statement for National Networks

2.2.1 There are 12 designated NPSs, setting out government policy on different types of national infrastructure development, including energy, transport, water, wastewater and waste. The NPSNN was published in December 2014 by the Department for Transport (Ref 3).

2.2.2 In relation to safeguarding mineral resources, paragraph 5.169 of the NPSNN states:

*“Applicants should safeguard any mineral resources on the proposed site as far as possible.”*

2.2.3 Paragraph 5.182 goes on to state:

*“Where a proposed development has an impact on a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to safeguard mineral resources.”*

## 2.3 National Planning Policy Framework

2.3.1 The revised NPPF was published in June 2019. Under Section 17, Facilitating the sustainable use of minerals, the NPPF states (at paragraph 204):

*“Planning policies should: [...]*

*c) safeguard mineral resources by defining Mineral Safeguarding Areas; and adopt appropriate policies so that known locations of specific minerals resources of local and national importance are not sterilised by non-mineral development where this should be avoided (whilst not creating a presumption that the resources defined will be worked);*

*d) set out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place...”*

## 2.4 Cambridgeshire and Peterborough Minerals and Waste Development Plan Core Strategy Development Plan Document and Proposals Map C: Minerals Safeguarding Areas (2011)

2.4.1 The *Cambridgeshire and Peterborough Minerals and Waste Development Plan* (Ref 1) comprises two development plan documents (DPDs) and three accompanying Proposals Maps as described below. Together, these documents replaced the ‘saved policies’ in the *Cambridgeshire Aggregates (Minerals) Local Plan* (1991) (Ref 12).

- 2.4.2 The Core Strategy DPD sets out the strategic vision and objectives, including a suite of development control policies, to guide minerals and waste development in the County. The Core Strategy and Proposals Map C: Minerals Safeguarding Areas were adopted by both Councils in July 2011 and sets the framework for all minerals and waste developments until 2026.
- 2.4.3 The Site-Specific Proposals DPD, Proposals Map A: Minerals Transport Zones and Proposals Map B: Waste were adopted in February 2012 by both Councils and are discussed below.

#### **Identification of Minerals Safeguarding Areas**

- 2.4.4 The Core Strategy DPD states that MSAs in Cambridgeshire and Peterborough were defined based on information from industry and from the *BGS: Mineral Resource Information in support of National, Regional and Local Planning Cambridgeshire (comprising Cambridgeshire and the City of Peterborough)* (2003) (Ref 8) and the Minerals Safeguarding Areas (information provided by *BGS, Cambridgeshire County Council, Peterborough City Council and Consultation* (Updated November 2009)) (Ref 11).
- 2.4.5 MSAs were defined for the following four minerals:
- a. Sand and gravel
  - b. Brick clay
  - c. Limestone
  - d. Chalk
- 2.4.6 Proposals Map C: Mineral Safeguarding Areas shows that a small part of the Scheme falls within an MSA for Sand and Gravel, where the route crosses Hen Brook to the east of St Neots (Proposals MSA Map Sheet 172) (see **Figure 3**, Sheet 1). The map accompanying the BGS Mineral Resource Information identifies this safeguarded mineral as river terrace gravels which are associated with Hen Brook.

#### **Identification of Minerals Consultation Areas**

- 2.4.7 In addition to identifying MSAs, Mineral Consultation Areas (MCAs) have been defined in Cambridgeshire as a buffer (typically 250 metres) around the edge of existing minerals sites and associated permitted reserves. In defining MCAs, each site is considered individually, and if circumstances suggest the 250 metre 'buffer' from the edge of any site should be varied e.g. due to mitigation proposals, then this has been taken into account.
- 2.4.8 In Cambridgeshire, whilst the Scheme falls within an MSA, it does not cross the boundary of an existing minerals site or an associated permitted reserve, and is not within an MCA.

## Minerals Local Plan Policies

### *Mineral Safeguarding Areas*

- 2.4.9 Specifically, in relation to safeguarding mineral resources, Policy CS26: Mineral Safeguarding Areas states:

*“Mineral Safeguarding Areas are designated for deposits of sand and gravel, brick clay, limestone and chalk that are considered to be of current or future economic importance and defined on the Proposals Map. The Mineral Planning Authority must be consulted on planning applications for developments in these Areas.”*

- 2.4.10 Policy CS26 then lists the types of development excluded from the need to consult with the Mineral Planning Authority. The Scheme does not fall under one of the exempt categories of development. The Policy concludes with:

*“Development will only be permitted where it has been demonstrated to the Mineral Planning Authority that*

1. The mineral concerned is no longer of any economic value or potential value, or
2. The mineral can be extracted prior to the development taking place, or
3. The development will not inhibit extraction if required in the future, or
4. There is overriding need for the development and prior extraction cannot be reasonably undertaken, or
5. The development is not incompatible.

*Separate planning applications will be required for the prior extraction of minerals and the non-minerals development.”*

- 2.4.11 It should be noted that the area of the Scheme affecting Hen Brook is not identified as an MSA in Cambridgeshire’s emerging policy and this is considered further below.

## 2.5 [Cambridgeshire and Peterborough Minerals and Waste Development Plan Site Specific Proposals Development Plan Document \(2012\)](#)

- 2.5.1 The *Site-Specific Proposals DPD* (SSP) (Ref 13) sets out site specific allocations for minerals and waste development and supporting site specific policies to support the strategic vision. However, there are no specific planning policies considered relevant within the SSP relating to minerals affected by the Scheme.

## 2.6 [Bedford Borough, Central Bedfordshire and Luton Borough Councils Minerals and Waste Local Plan: Strategic Sites and Policies Local Development Document \(2014\)](#)

- 2.6.1 Bedford Borough Council, Central Bedfordshire Council and Luton Borough Council adopted the *Minerals and Waste Local Plan Strategic Sites and Policies Document (MWLP:SSP)* (Ref 2) for the combined authorities in January 2014.

The document replaces many of the policies contained within the Bedfordshire and Luton MWLP 2005 and covers the period to 2028.

### **Identification of Minerals Safeguarding Areas**

- 2.6.2 The areas designated as MSAs are shown on the Policies Maps which accompanies the MWLP:SSP. Minerals Safeguarding Areas (MSAs) are identified for the following minerals:
- a. River valley (i.e. alluvial and river terrace sands and gravels) / glacial sand and gravel
  - b. Woburn Sands
  - c. Chalk
  - d. Oxford Clay
  - e. Cornbrash Limestone
  - f. Gault Clay
- 2.6.3 The Policies Map Location Plan shows that the Scheme to the east and south of the existing Black Cat roundabout (refer to **Figure 3**) partially falls within the MSA for “river valley/glacial sand and gravels” associated with the valley of the River Ouse. Inset Map 5 of the Policies Map also shows that the Black Cat Quarry Strategic Mineral Site lies within the Order Limits.
- 2.6.4 In Bedfordshire, there are two areas within the Order Limits which the Scheme identifies for borrow pits, to the west and east of the existing Black Cat roundabout. The proposed borrow pit to the west of the existing Black Cat roundabout is located to the south of Chawston and falls outside the MSA boundary in Bedfordshire. The proposed borrow pit to the east of the existing Black Cat roundabout is located within the MSA boundary within Black Cat Quarry (refer to **Figure 3**).
- 2.6.5 Mapping in the BGS: Mineral Resource Assessment for Development Plans Bedfordshire: Resources and Constraints (1995) (Ref 9) shows the mineral within the MSA to be terrace gravels and alluvium. The boundary of the MSA for “*river valley sands and gravels*” defined in the MWLP:SSP Policies Map in the area of the Scheme does not exactly follow the distribution of this mineral on the BGS Resource Assessment map. It sometimes excludes areas mapped by the BGS as containing river terrace gravels and alluvium (e.g. to the north-west of the existing Black Cat roundabout) and sometimes includes areas where mineral resources have not been defined by the BGS (e.g. to the east of the River Great Ouse). It also appears that the MSA for “river valley sands and gravels” does not include a buffer zone surrounding the safeguarded mineral.
- 2.6.6 Surface development within an MSA is required to be accompanied by a minerals resource assessment. Central Bedfordshire Council and Bedford Borough Council have produced guidance in the form of a Technical Note to assist developers on producing mineral resource assessments “*Mineral Safeguarding Areas – Technical Note on the production of Mineral Resource*”

*Assessments*” (November 2016) (Ref 14). Section 4 contains a Minerals Resource Assessment in relation to the Scheme.

### **Identification of Strategic Mineral Sites**

- 2.6.7 Bedford Borough Council, Central Bedfordshire Council and Luton Borough Council have identified Strategic Mineral Sites, which is defined as “a site needed to help deliver the aims and objectives of the Plan to provide mineral to meet the requirements of the national and sub-regional guidelines”.
- 2.6.8 Of these, only Black Cat Strategic Mineral Site is located within the Order Limits to the east of the existing Black Cat roundabout (refer to **Figure 3**). Planning permission was granted by the then Bedfordshire County Council in March 2008 for the winning and working of 1.06 million tonnes of sand and gravel and the installation of a mineral processing plant. The permitted restoration scheme comprises a mix of agricultural land, riverine channels and wet woodland, with floodplain pastures, incorporating the importation of 93,000 tonnes of inert waste.
- 2.6.9 In 2010, Bedford Borough Council consented the variation of the planning permission to enable a five-year extension of time limits for implementation of the consent. A further planning permission was granted by Bedford Borough Council in 2015 for variation of the approved site layout, phased sequence of working and restoration scheme.
- 2.6.10 The date for final restoration of Black Cat Quarry is Spring 2021 as noted in Bedfordshire Authorities’ (Bedford Borough Council and Central Bedfordshire Council ) Scoping Response within the Scoping Opinion **[TR010044/APP/6.5]** for the Scheme. The Scheme will cross the centre of the restored Black Cat Quarry site running from west to east. It is understood that the Black Cat Quarry closed in 2020 and that restoration is pending.

### **Minerals Local Plan Policies**

#### *Strategic Mineral Sites*

- 2.6.11 MSP 1 Overall Spatial Strategy for Aggregate Sand and Gravel and Silica Sand states (inter alia):
- “Strategic mineral sites for the supply of aggregate sand and gravels are allocated as follows:*
- a. Willington Lock*
  - b. Blunham/ Roxton*
  - c. Black Cat*
  - d. Willowhill Farm*
  - e. Bridge Farm*
  - f. Land south of Broom Village...”*
- 2.6.12 As set out above, the majority of the Black Cat Strategic Mineral Site is located within the Order Limits. This report demonstrates that the Scheme will not prejudice the future supply of sand and gravel from Black Cat Quarry in accordance with Policy MSP1.

*Minerals Safeguarding Areas*

- 2.6.13 Policies MSP11 and MSP12 sets out the type of development that can take place within MSAs and the potential need for a Mineral Resource Assessment prior to development taking place within these areas. As the Scheme is not one of the exempted categories, Highways England have provided this report to demonstrate that the Scheme is compliant with Policies MSP11 and MSP12 in support of the DCO application.
- 2.6.14 Mineral Strategic Policy MSP 11: Minerals Resource Assessment states:  
*“Surface development proposals within a Mineral Safeguarding Area (excluding exemptions set out under policy MSP12: Surface Development within a Mineral Safeguarding Area) shall be accompanied by a Minerals Resource Assessment. This shall be undertaken by a suitably qualified professional, which establishes through site specific geological survey data, the existence or otherwise of a mineral resource of economic importance.”*
- 2.6.15 Mineral Strategic Policy MSP 12: Surface Development within a Mineral Safeguarding Area states:  
*“Surface development will only be permitted within a Mineral Safeguarding Area where it has been demonstrated that:*
- a. The mineral concerned is proven to be of no economic value as a result of the undertaking of the Mineral Resource Assessment; or*
  - b. The development will not inhibit extraction if required in the future; or*
  - c. There is an overriding need for the development and prior extraction cannot reasonably be undertaken; or*
  - d. The mineral can be extracted prior to the development taking place.”*

2.6.16 The text which accompanies Policy MSP12 states (at paragraph 6.41):  
*“Where it has been determined that it is necessary for the development to take place, and that the mineral is considered to be of sufficient quality and quantity etc, the MPA will seek prior extraction of that mineral subject to the provision of satisfactory information, including a full assessment and acceptability of:*

    - a. The size and nature of the proposed surface development;*
    - b. The quality and quantity of the mineral that would be recovered;*
    - c. The practicability of extraction;*
    - d. The environmental impacts of mineral extraction; and*
    - e. The size and nature of the proposed development.*

*By this means valuable mineral resources will be safeguarded from needless sterilisation.”*

## 2.7 Emerging local plan documents

### **Cambridgeshire and Peterborough Minerals and Waste Local Plan (November 2019)**

- 2.7.1 The Cambridgeshire and Peterborough Minerals and Waste Local Plan (Ref 6) will replace the Cambridgeshire County Council and Peterborough City Council MWDP Core Strategy DPD (2011) (Ref 1) and the Cambridgeshire County Council and Peterborough City Council MWDP Site Specific Proposals DPD (2012) (Ref 13). The emerging MWLP was subject to examination in September 2020. Following the examination, the Councils published a Schedule of Modifications. However, as none of the proposed modifications relate to mineral safeguarding policy it is considered that the minerals safeguarding policies in the emerging MWLP carry some weight.

#### *Minerals Safeguarding Areas*

- 2.7.2 In relation to MSAs, draft Policy 5: Mineral Safeguarding Areas is considered relevant and states:

*“Mineral Safeguarding Areas (MSAs) are identified on the Policies Map for mineral resources of local and/or national importance. The Mineral Planning Authority must be consulted on all development proposals in these areas [...].”*

- 2.7.3 Development within MSAs which is not covered by [a number of] exceptions will only be permitted where it has been demonstrated that:

- a. *“the mineral can be extracted where practicable prior to development taking place; or*
- b. *the mineral concerned is demonstrated to not be of current or future value; or*
- c. *the development will not prejudice future extraction of the mineral; or*
- d. *there is an overriding need for the development (where prior extraction is not feasible).”*

- 2.7.4 In developing the emerging MWLP, Cambridgeshire County Council and Peterborough City Council clarifies that, in contrast to the MSA identified in the 2011 Core Strategy DPD (Ref 1), the MSAs constitute the extent of known reserves plus a 250 metre buffer. The Proposed Submission Policies map shows that in contrast to the 2011 Core Strategy DPD, the revised MSA for Sand and Gravel does not include that part of Hen Brook within the Order Limits.

#### *Mineral Development Areas (MDAs) and Mineral Allocation Areas (MAAs)*

- 2.7.5 The emerging plan also identified Mineral Development Areas (MDAs) and Mineral Allocation Areas (MAAs). However, there are no MDAs or MAAs within or in the vicinity of the Scheme.

## 2.8 Commentary

- 2.8.1 The above planning policy applies at both the local and national level.
- 2.8.2 For that part of the Scheme within Cambridgeshire, this report seeks to demonstrate that in accordance with Policy CS26 of the *Cambridgeshire County Council and Peterborough City Council MWDP Core Strategy (2011)* (Ref 1), there is no mineral of any economic value or potential value at Hen Brook (see **Figure 3**, Sheet 1) and, even if there was, prior extraction of it cannot be undertaken due to environmental constraints and there is an overriding need for the Scheme.
- 2.8.3 For that part of the Scheme within Bedfordshire, this report contains a Minerals Resource Assessment to satisfy the requirements of Policy MSP 11 of the *Bedford Borough Council Central Bedfordshire Council and Luton Borough Council MWLP:SSP* (Ref 2). This demonstrates that the only mineral resources affected by the Scheme are the river valley sands and gravels associated with the valley of the River Ouse to the south west of the existing Black Cat roundabout (see **Figure 3**, Sheet 2). In accordance with MSP 12, the Minerals Resource Assessment demonstrates that the mineral concerned is of no economic value and, even if there was, prior extraction of it cannot reasonably be undertaken and there is an overriding need for the Scheme.
- 2.8.4 The report also demonstrates that the Scheme will not prejudice the extraction of minerals by the identified Strategic Mineral Site at Black Cat Quarry, the majority of which falls within the Order Limits.
- 2.8.5 In demonstrating the above, the tests in paragraphs 5.169 and 5.182 of the NPSNN and paragraph 204 of the NPPF are also addressed.

## 3 Need for the Scheme

### 3.1 Requirement for the Scheme

3.1.1 Section 104 of the Planning Act 2008 (the Act) (Ref 15) sets out that in deciding any application for a DCO, “the Secretary of State must have regard to any national policy statement which has effect in relation to development of the description to which the application relates.” It goes on to state that: “The Secretary of State must decide the application in accordance with any relevant national policy statement, except to the extent that one or more of subsections (4) to (8) applies.”

3.1.2 The Case for the Scheme [TR010044/APP/7.1] contains a comprehensive planning policy assessment which identifies the key planning considerations and assesses the Scheme against the NPSNN and other NPS and development plan policies which the Secretary of State may consider relevant to determination of the DCO application. The sections below highlight relevant issues in relation to the need for the Scheme.

#### **National Policy Statement for National Networks**

3.1.3 The NPSNN provides guidance for promoters of national network Nationally Significant Infrastructure Projects (NSIPs) and also provides detail on the need for specified schemes and the policy for determining them. The introduction to Section 2 of the NPSNN sets out a summary of the Government’s vision and strategic objectives for the national networks:

*“The Government will deliver national networks that meet the country’s long-term needs; supporting a prosperous and competitive economy and improving overall quality of life, as part of a wider transport system. This means:*

*Networks with the capacity and connectivity and resilience to support national and local economic activity and facilitate growth and create jobs.*

*Networks which support and improve journey quality, reliability and safety.*

*Networks which support the delivery of environmental goals and the move to a low carbon economy.*

*Networks which join up our communities and link effectively to each other.”*

3.1.4 Paragraphs 2.1 to 2.11 of the NPSNN set out the summary of need for improvements to the road and rail network. The critical need to improve the national networks to address road congestion and support economic growth is identified.

3.1.5 The Government has concluded that there is a compelling need for development of the national networks. Paragraph 2.10 of the NPSNN states:

*“The Government has therefore concluded that at a strategic level there is a compelling need for development of the national networks – both as individual networks and as an integrated system. The Examining Authority and the Secretary of State should therefore start their assessment of applications for infrastructure covered by this NPSNN on that basis.”*

3.1.6 The NPSNN identifies the critical need to improve the national networks to address road congestion and support economic growth. The NPSNN states in paragraph 2.23 that the Government’s wider policy is to bring forward improvements and enhancements to the network which will include (amongst other means) junction improvements, new slip roads and upgraded technology to:

*“Address congestion and improve performance and resilience at junctions, which are a major source of congestion.”*

3.1.7 This is directly relevant to the Scheme, which if not delivered would give rise to a number of issues:

- a. Network Safety - Further deterioration in safety is predicted in future years, resulting in increased accident rates on the Black Cat to Caxton Gibbet route. Increasing congestion, coupled with delay and unreliable journey times leading to driver frustration, are likely to have a detrimental impact on safety on this section of the SRN.
- b. Congestion – The existing route is identified as already being close to capacity, and exceeding capacity at some locations during peak periods. This situation is expected to worsen up to the planned Scheme opening year (2025) and if no intervention is made the route will exceed capacity by the design year (2040) and beyond, resulting in continued and worsened unreliable journey times and delay.
- c. Economic Growth - Significant development is planned along the Scheme corridor and beyond, with each of the host authorities identifying significant growth in their current and emerging Local Plan periods and having an ambition for further growth beyond then. The Scheme will have a marked impact on the economy, connectivity and accessibility, and is needed to unlock both planned and long-term future growth.

3.1.8 In summary, development of the national road network including the Scheme would increase network safety, reduce congestion and delays, and thereby support and promote national and local economic growth and regeneration. The NPSNN recognises that improving transport links is key to facilitating growth and the Scheme would allow for greater movement of people and goods along the strategic highway network with increased efficiency.

### **National Planning Policy Framework**

3.1.9 The revised NPPF sets out the Government’s planning policies for England and how these are expected to be applied. The NPPF does not contain specific policies for NSIPs, however the NPPF may be considered relevant in the determination of the DCO application. When considering the needs for the proposed development and the presumption in favour of sustainable development, NPPF paragraph 8 states that there are three overarching objectives to achieving sustainable development, all of which are interdependent, including the economic objective, the social objective and the environmental objective.

- 3.1.10 When considered as a whole, the Scheme meets the requirements of the economic, social and environmental objectives of sustainable development by achieving the following:
- Providing reliable infrastructure and thereby reducing congestion, improving journey times and journey reliability along the route, assisting in the movement and transportation of goods and the workforce along the SRN.
  - Supporting strong, vibrant and healthy communities, the Scheme would remove long distance traffic from the existing A428 road, which would be retained as part of the local road network serving the local community. By increasing the capacity of the SRN it will also reduce the instances where drivers are motivated to seek alternative routes on local roads in order to avoid heavy congestion on the SRN, thereby helping to avoid 'rat running' through villages.
  - Careful design to integrate the Scheme within the surrounding landscape; the Scheme has been designed to make provision for the replacement and enhancement of existing routes used by pedestrians, equestrian users and cyclists, contributing towards the health, social and cultural wellbeing of communities.
  - Measures incorporated to protect from and mitigate environmental effects as set out in the ES [TR010044/APP/6.1].

- 3.1.11 Other chapters of the NPPF which are considered relevant to the Scheme include Chapter 6 (Building a Strong and Competitive Economy) and Chapter 9 (Promoting Sustainable Transport).

#### **Local Planning Policy**

- 3.1.12 In relation to major infrastructure projects, Policy CS1 of the Cambridgeshire and Peterborough Minerals and Waste Development Plan Core Strategy DPD (2011) states (inter alia):

*“Over the period to 2026 a significant amount of growth will be taking place as the Plan area falls within the London – Stansted – Cambridge – Peterborough Growth Area, a strategic area for housing and employment growth... Major infrastructure projects will be facilitated through the supply of mineral...”*

- 3.1.13 Paragraph 2.8 states:

*“Given the proposed level of growth in housing and employment, there will be significant levels of new development and redevelopment of buildings and infrastructure.”*

- 3.1.14 Section 6.58 acknowledges the potential need for sand and gravel borrow pits for the Scheme and states:

*“Borrow pits arise where major proposals come forward e.g. for road improvements (A428, A14, A1, A47) or a bypass or major infrastructure project, and there is a source of aggregate in the immediate area. Permission has sometimes been given for a 'borrow pit' to supply a single project and for a temporary period only.”*

- 3.1.15 Two borrow pits are proposed for the Scheme in Cambridgeshire located to the north of the existing Caxton Gibbet roundabout, although neither of these are within the MSA boundary in Cambridgeshire.
- 3.1.16 In relation to non-mineral development in an MSA, Policy CS26 addresses this issue. In relation to transport, paragraph 2.20 states:  
*“The MWDP must also have regard to Local Transport Plans that set out policies and proposals to help deliver integrated transport and implement the transport aspects of development plan strategies.”*
- 3.1.17 The existing A428 is discussed within paragraph 2.2 of Huntingdonshire’s Local Plan to 2036 (2019), which states “Highway linkages are particularly good. East-west linkages within the district are provided by the A428 and the A14 which facilitates access west to the Midlands and east to Europe via the East Coast ports.”
- 3.1.18 Chapter 3 describes the key issues that the Local Plan needs to address and shows how they have shaped the spatial vision and objectives, which in turn shape the strategy and policies within the Plan. The existing A428 is identified under the key economic issues and challenges as follows:  
*“Improvements to key transport infrastructure are critical to support economic growth, including improvements to the A14, A1, A428 corridor, and East Coast mainline...”*  
*“Plan further strategic transport infrastructure improvements: A project to upgrade the section of the A428 trunk road between Black Cat and Caxton Gibbet junctions is currently being developed with the preferred route announced in February 2019. The scheme is anticipated to commence in 2021/22 for completion in 2025/26 subject to funding and approvals.”*
- 3.1.19 Paragraph 4.13 states:  
*“Significant investment is being directed to the A14 and A428 to improve the reliability of journeys on these routes. The development strategy focuses development in locations with good access to the upgraded routes to maximise the local benefits of this investment.”*
- 3.1.20 The Scheme is also further discussed at paragraph 4.50, which states:  
*“Improvements are also planned to the A428 between the Black Cat roundabout with the A1 and the Caxton Gibbet roundabout with the A1198. The preferred route was announced in February 2019. If consented the Scheme is expected to commence in 2021/22 and provide additional road capacity, reduce congestion and delays and facilitate more reliable journey times.”*

3.1.21 Paragraph 10.6 also references the Scheme as follows:

*“A key issue is the effect of this development on the strategic highway network. While the A428 has been duelled east of Caxton Gibbet, and the A1 and A421 to the west are also dual carriageway, this part of the A428 is currently still a single 2-lane carriageway, and currently experiences congestion at certain times of the day. Highways England are progressing an improvement scheme which is part of the government’s Road Investment Strategy April 2015 to March 2020. On-site works are anticipated to start around spring 2020.”*

### **Summary**

3.1.22 The planning policy review has identified that a significant amount of growth is anticipated over the next few years within the London – Stansted – Cambridge – Peterborough Area and that improvements to key transport infrastructure are critical to support economic growth. The new dual carriageway is recognised as a critical scheme to be brought forward given the acknowledged issues of congestion, lack of capacity and delays associated with the current route.

3.1.23 The need for improvements to national networks is clearly established in the NPSNN, with particular references to the need for the Scheme in local planning policy documents.

## **3.2 Requirement for sand and gravel**

### **National Planning Policy Framework**

3.2.1 In relation to sand and gravel specifically, the NPPF states at paragraph 207 “Minerals planning authorities should plan for a steady and adequate supply of aggregates by:[...] f) maintaining landbanks of at least 7 years for sand and gravel and at least 10 years for crushed rock, whilst ensuring that the capacity of operations to supply a wide range of materials is not compromised.”

### **Cambridgeshire and Peterborough Minerals and Waste Development Plan Core Strategy DPD (2011)**

3.2.2 Paragraph 1.15 of the Core Strategy (Ref 1) states:

*“Aggregate production is the main mineral activity in the area, from significant sand and gravel reserves to more limited extraction of soft oölitic limestone in the north west of the Plan area.”*

3.2.3 The Core Strategy acknowledges the requirements of major infrastructure projects and the supply of minerals in Policy CS1 Strategic Vision and Objectives for Sustainable Minerals Development, which states (inter alia):

*“...Major infrastructure projects will be facilitated through the supply of mineral. In the case of the future improvements to the A14 (Ellington to Fen Ditton), specific provision will be made through sand and gravel and clay borrow pits close to the scheme...”*

3.2.4 Policy CS4, The Scale and Location of Future Sand and Gravel Extraction, states (inter alia):

“The Mineral Planning Authorities will maintain a sand and gravel landbank of at least 7 years and will meet the requirement to supply 2.82 million tonnes of sand and gravel per annum, plus include a margin for flexibility. Provision is, therefore, made for the supply of 3.0 million tonnes of sand and gravel per annum over the Plan period.

*New allocations, together with permitted reserves, will enable the supply of the following over the plan period:*

- *an annual average of 0.75 tpa from the Northern Zone, i.e. Peterborough and north Fenland District,*
- *an annual average of 0.85m tpa from the Central / Southern Zone (excluding the Earith / Mepal Area)*
- *an annual average of 1.4m tpa from the Earith / Mepal Zone (from 2010 onwards)”.*

3.2.5 The Order Limits do not lie within any of these allocations. The Core Strategy also allocates land for borrow pits in relation to the A14 scheme. However, these allocations are not affected by the Scheme. Separately, two borrow pits are proposed in Cambridgeshire for the Scheme, which are sited to the north of the existing Caxton Gibbet roundabout. However, neither are within the MSA for sand and gravel in Cambridgeshire or any allocated mineral or borrow pit sites.

**Cambridgeshire and Peterborough Minerals and Waste Development Plan Annual Monitoring Report (2018)**

3.2.6 Up to date information concerning the status of permitted mineral sites can assist in determining the need for additional facilities and is recorded in Annual Monitoring Reports (AMR) (Ref 16). This information includes the quantity of mineral worked and the extent of remaining reserves.

3.2.7 The most up to date AMR for Cambridgeshire County Council was published in February 2020 and covers the period 1 January 2018 – 31 December 2018. With regards to sand and gravel, the AMR states:

*“Government policy requires landbanks to be maintained for all primary aggregate minerals, with a required landbank period for sand and gravel of at least 7 years. The adopted Cambridgeshire & Peterborough Minerals and Waste Core Strategy makes provision for an annual production of 3.0m t per annum.”*

3.2.8 The AMR states that the Landbank period for sand and gravel in Cambridgeshire and Peterborough is 13.94 years, based upon the landbank of permissions (as at 31 December 2018) being 41.83 million tonnes, which equates to a landbank of 3.0 million tonnes annually.

3.2.9 In addition to permitted reserves, the AMR identifies six allocations for the future supply of sand and gravel (excluding borrow pits for A14 improvements) and their progress for implementation (refer to **Table 3-1**).

**Table 3-1: Progress of Allocated Sites for Sand and Gravel**

Policy Ref	Site Name	Status
M1A	Cottenham	Allocated, partially permitted
M1B	Needingworth	Allocated
M1C	Wimblington	Allocated
M1D	Kings Delph, Whittlesey	Allocated
M1E	Maxey	Partially implemented, partially permitted
M1F	Pode Hole and Eye/ Thorney	Partially implemented, partially permitted

3.2.10 **Table 3-2** demonstrates the provision of sand and gravel within Cambridgeshire County Council and Peterborough City Council as at 31 December 2017, as identified in the AMR.

**Table 3-2: Provision of sand and gravel within Cambridgeshire and Peterborough including permitted and allocated resources as at 31 December 2018.**

	Permitted reserves as at 31/12/18 (million tonnes)	Allocated reserves as at 31/12/18*	Total planned provision as 31/12/18*	Number of years*	Date current planned provision would be exhausted*
EoEAWP sub-regional apportionment of 2.88 M t pa	41.83	21.9	63.73	22.1	2040
Cambridgeshire & Peterborough Core Strategy Provision of 3.0 M t pa	41.83	21.9	63.73	22.7	2039
Rolling average of 10 Years Sales (2009 - 2015) of 2.36 M t pa	41.83	21.9	63.73	28.9	2045

\*calculations exclude the 14Mt allocated post 2026 at Block Fen / Langwood Fen, Mepal

3.2.11 Based on the above, it can be seen that adequate provision has been made within the landbank in Cambridgeshire and Peterborough and allocated sites will provide a suitable supply of sand and gravel for future needs.

**Bedford Borough Central Bedfordshire and Luton Borough Council's Minerals and Waste Local Plan: Strategic Sites and Policies (2014)**

3.2.12 Paragraph 6.4 of the MWLP:SSP (Ref 2) states:

*“Within the above framework, sites have been allocated for mineral working according to the following sequential test:*

- 1. Extensions to existing mineral extraction sites*
- 2. “Satellite” extraction sites serving an existing processing plant site*
- 3. New sites not connected with any existing operation.”*

Paragraph 6.5 goes on to state:

*“The Plan provides for the continued supply of aggregate sands and gravels, so as to supply areas of future growth with construction materials. The Plan has two key aims:*

- to provide an average of 1.84 million tonnes per annum of sand and gravel for each year of the Plan, until such time that national guidelines on aggregate production are further revised*
- to maintain a landbank sufficient for at least 7 years supply of sand and gravel.”*

3.2.13 Paragraph 6.10 states:

*“In addition to the permitted reserves at existing workings, new strategic sites for the production of sand and gravel aggregates will be required. In order to maintain supply of a minimum of 1.84 million tonnes per annum, an additional 10.07 million tonnes of sands and gravels will need to be released up to and throughout the Plan period. The strategic aggregate sand and gravel sites which will supply this amount of aggregate sand and gravel are set out in policy MSP1.”*

3.2.14 In relation to borrow pits, Policy MSP 9 states:

*“Borrow Pits will be permitted where they meet the following criteria:*

- The site is required to supply minerals to specific major construction works;*
- The site is well related geographically to the project it is intended to supply;*
- The borrow pit will serve the related project only, and will not provide material for the wider market or be retained beyond the life of the project it serves;*
- The borrow pit will bring about the removal of mineral and/or waste traffic movements from the public highway and/or from passing local communities;*
- The borrow pit will be restored within a similar timescale as the project to which it relates, and restoration can be achieved to an approved scheme in the event that it is only partly worked;*
- Waste materials will only be imported from the project itself unless required to achieve beneficial restoration as set out in an approved scheme;*

- *There is an overall environmental benefit as a result of the proposal and appropriate mitigation measures will be put in place to minimise any adverse environmental impacts.”*

3.2.15 No sites for borrow pits have been allocated within the MWLP:SSP. Two borrow pits for use within the Scheme within Bedfordshire are proposed within the Order Limits. One is located to the west of the existing Black Cat roundabout outside the sand and gravel MSA in Bedfordshire, and one to the east of the existing Black Cat roundabout within Black Cat Quarry which is a Strategic Minerals Site within the sand and gravel MSA for Bedfordshire (refer to **Figure 3**).

**Central Bedfordshire and Bedford Borough Councils Minerals and Waste Planning Monitoring Report (2015)**

3.2.16 The most up to date monitoring report (Ref 17) for Bedfordshire was produced for the period 1 January 2014 – 31 December 2014. The monitoring report states that *“Information on permitted reserves and annual sales of aggregate sand and gravel is contained in the Local Aggregates Assessment.”*

**Bedfordshire Authorities Local Aggregate Assessment (2017)**

3.2.17 The Local Aggregate Assessment (LAA) (Ref 18) provides information on a forecast of demand for aggregates based on existing reserves and the agreed apportionment, an assessment as to whether the 7 year landbank for sand and gravel has been met, and information on existing sites, strategic sites and geology of the area.

3.2.18 The most up to date LAA for Bedfordshire was published for the year ending 31 December 2017. With regards to sand and gravel, the LAA states the following:  
*“The Minerals and Waste Local Plan: Strategic Sites and Policies (Adopted 2014) allocates six strategic aggregate sand and gravel sites. During 2017 no planning permissions were granted for additional sand and gravel extraction, although an application proposing the extraction of over 1 Mt of sand and gravel was received in respect of an allocated site demonstrating that applications continue to come forward in respect of allocated reserves. The allocated sites should ensure that a landbank in excess of 7 years is maintained over the Plan period to 2028.”*

3.2.19 A summary of the main conclusions of the LAA is reproduced in **Table 3-3**.

**Table 3-3: Summary of main conclusions of the Central Bedfordshire, Bedford Borough and Luton Borough Council’s Local Aggregate Assessment (2017).**

	2017 Performance	Comparison with previous year
Land-won sand and gravel sales (million tonnes, Mt)	1.643	0.049 (2.9%) decrease
Permitted reserves of sand and gravel (Mt)	15.910	2.431 Mt reduction
Annual Production as a percentage of Apportionment figure	89%	Decrease of 3%
Landbank based on 10 years sales average (years)	12.4	1.9 reduction
Landbank based on 3 years sales average (years)	10.3	1.5-year reduction
Landbank based on Apportionment figure (years)	8.6	1.4-year reduction
Number of Allocated Sites	6	6 (no change)
Potential yield (Mt) from Allocated Sites	9.19 – 11.19*	8.95-11.4

\*The difference in the potential yield from allocated sites compared with that recorded in the previous year arises from utilising tonnages stated in planning applications and recalculations of potential yields.

3.2.20 Based on the above, the LAA for 2017 demonstrates that the provision of sand and gravel is being maintained above the seven year requirement. Allocated sites will therefore provide a suitable supply of sand and gravel for future needs.

### Summary

3.2.21 National and local policy identifies the need for an adequate supply of minerals to provide the goods required by society and to support economic growth. The Scheme passes through two separate areas allocated as MSAs for sand and gravel in Bedfordshire and Cambridgeshire. The Scheme also crosses a Strategic Mineral Site at Black Cat Quarry in Bedfordshire. Other than Black Cat Quarry, the Scheme does not cross any active, permitted or allocated extensions for mineral or borrow pit sites.

- 3.2.22 There are four proposed borrow pits for the Scheme:
- a. Two in Cambridgeshire to the north of the existing Caxton Gibbet roundabout and outside the MSA for sand and gravel in Cambridgeshire.
  - b. Two in Bedfordshire, one to the west and one to the east of the existing Black Cat roundabout. The borrow pit to the west is outside the MSA for sand and gravel in Bedfordshire whilst the borrow pit to the east is within the MSA and within the footprint of Black Cat Quarry (refer to **Figure 3**).
- 3.2.23 Planning policy requires that a landbank equivalent to 7 years of supply of sand and gravel should be maintained.
- Cambridgeshire County Council and Peterborough City Council Annual Monitoring Report 2017 (2019)*
- 3.2.24 The most recent AMR for Cambridgeshire County Council and Peterborough City Council (Ref 16) demonstrates that the land bank (as at 31 December 2017) is far in excess of and nearly double the required minimum and stood at 14.39 years at that date. Therefore, adequate provision has been made within the landbank and allocated sites will provide a suitable supply of this mineral for the future.
- 3.2.25 When the need for the Scheme is compared to the need for further sand and gravel extraction, it is clear that need for the Scheme overrides the need to safeguard minerals, particularly given that there is already a 13.8-year landbank for the Cambridgeshire County Council and Peterborough City Council area. In any event, mineral extraction at Hen Brook would have unacceptable environmental impacts on the Brook itself and cannot reasonably be undertaken. Therefore, the test set out in Policy CS26 of the Core Strategy is satisfied and prior extraction is not required in this case.
- Central Bedfordshire Council, Bedford Borough Council and Luton Borough Council Local Aggregate Assessment 2017*
- 3.2.26 The most recent LAA for Bedfordshire (dated 2017) (Ref 18) demonstrates that the landbank (as at 31 December 2017) was then in excess of the required minimum by 1.6 years, with a provision of 8.6 years. Therefore, adequate provision has been made within the landbank and allocated sites will provide a suitable supply of mineral in the future.
- 3.2.27 Therefore, the need for the Scheme clearly overrides the need to safeguard minerals given that there is already an 8.6-year landbank for sand and gravel. Notwithstanding this, where minerals can be extracted prior to construction of the Scheme, they will be extracted (i.e. at the Black Cat Quarry and through the use of a borrow pit within Black Cat Quarry). At the area in Bedfordshire, which is within an MSA, to the south west of the existing Black Cat roundabout, minerals cannot be reasonably be extracted due to practical and environmental constraints. Accordingly, the test set out in Policy MSP 12 of the MWLP:SSP is satisfied, and prior extraction in the MSA area to the south west of the existing Black Cat roundabout is not required in this case. A Minerals Resource Assessment is also included at Section 4, which serves to demonstrate this and that the requirements of Policy MSP 11 have been met.

### 3.3 Conclusions

- 3.3.1 National policy has identified a compelling need for the Scheme which is supported by local plan growth initiatives. The Scheme is an essential part of the delivery of infrastructure for Cambridgeshire, Bedfordshire and the surrounding area, and would improve capacity, connectivity, and improve journey quality, reliability and safety.
- 3.3.2 In contrast and given the 13.9 year supply in Cambridgeshire and 8.6 year supply in Bedfordshire, the preceding assessment demonstrates that there is no need for the allocation of new sites for the extraction of sand and gravel. The development plans for the area include a number of allocations for additional reserves of sand and gravel, and this will be sufficient for future mineral requirements. There is no pressing need for further sites to be allocated in the development plan period, and the Scheme does not inhibit current or allocated mineral sites.
- 3.3.3 When taking the above into account as well as the limited area of underlying sand and gravel potentially affected, the need for the Scheme clearly overrides the need for its prior extraction. Notwithstanding that the overriding need for the Scheme has been established, a Minerals Resource Assessment for the areas within the MSAs which will potentially be affected by the Scheme is included at Section 4. This demonstrates that the mineral is of no economic value and cannot reasonably be extracted prior to the Scheme taking place in any event.

## 4 Practicability and environmental acceptability for the extraction of mineral reserves and infrastructure

### 4.1 Policy context

4.1.1 In Cambridgeshire, Policy CS26 of the Cambridgeshire County Council and Peterborough City Council MWDP Core Strategy (Ref 1) states that development in an MSA will be permitted where it has been demonstrated that:

“The mineral concerned is no longer of any economic value or potential value...”

4.1.2 Similarly, in Bedfordshire, Policy MSP 12 of the MWLP:SSP states (inter alia):

*“Surface development will only be permitted within a Mineral Safeguarding Area where it has been demonstrated that:*

*The mineral concerned is proved to be of no economic value as a result of the undertaking of the Minerals Resource Assessment...”*

4.1.3 Policy MSP 11 of the Bedfordshire MWLP:SSP (Ref 2) states:

*“Surface development proposals within a Mineral Safeguarding Area (excluding exemptions set out under policy MSP12: Surface Development within a Mineral Safeguarding Area) shall be accompanied by a Minerals Resource Assessment. This shall be undertaken by a suitably qualified professional, which establishes through site specific geological survey data, the existence or otherwise of a mineral resource of economic importance.”*

4.1.4 In addition, Policy CS26 and Policy MSP 12 state that development will be permitted in MSAs if there is overriding need for the development and prior extraction cannot reasonably be undertaken.

4.1.5 This section of the report demonstrates that the MSA mineral resource affected by the Scheme, is of no economic value or potential value and in addition, prior extraction of the mineral resource is not practical or environmentally feasible.

### 4.2 Environmental constraints

#### **Prior extraction**

4.2.1 Prior extraction refers to the removal of economic mineral resources that are found at or close to the ground surface (shallow resources) from development sites, prior to the commencement of construction work. When considering the Order Limits in which prior extraction could practically be undertaken, the following constraints need to be taken into account:

- a. The protection of any landscape features.
- b. The potential for damage to designated habitats and/or species.
- c. The presence of archaeological remains and taking into consideration their setting.
- d. The presence of historic buildings or structures and taking account of their setting.

- e. Proximity to an existing sensitive development e.g. residential property.

### **Constraints**

4.2.2 A desktop assessment has been undertaken of potential environmental constraints which are likely to apply both within and nearby the Order Limits. Where applicable, the following potential environmental and planning designations (refer to **Figure 1**) were considered:

- a. National Parks
- b. Areas of Outstanding Natural Beauty (AONBs)
- c. Special Areas for Conservation (SAC)
- d. Special Protection Areas (SPA)
- e. Ramsar Sites
- f. National Nature Reserves (NNR)
- g. Sites of Special Scientific Interest (SSSI)
- h. Ancient Woodland
- i. Local Nature Reserves (LNR)
- j. Sites of biological Importance (SBI) equivalent to “Local Wildlife Site”
- k. World Heritage Sites
- l. Registered Battlefields
- m. Scheduled Monuments
- n. Registered Parks and Gardens
- o. Listed Buildings
- p. Conservation Areas
- q. Watercourses
- r. Flood Zones 2 and 3
- s. Air Quality Management Areas (AQMAs)
- t. Green Belt
- u. Public highway network
- v. Public Rights of Way
- w. Electrical infrastructure (power lines and substation)
- x. Land within 100 metres of a residential property
- y. Land within 100 metres of other sensitive receptors (e.g. sewage works, educational facilities, industrial uses etc).

- 4.2.3 **Figure 2** shows any constraints on mineral extraction within or adjacent to the Scheme arising from the above designations. These have been derived in the form of the following buffer zones:
- Mineral extraction should be more than 20m from Local Nature Reserves.
  - Mineral extraction should be more than 25m from identified watercourses.
  - Mineral extraction should avoid areas of Flood Zone 2 and Flood Zone 3 where possible.
  - Mineral extraction should be more than 20m from ancient woodland.
  - Mineral extraction should be more than 20m from electrical infrastructure.
  - Mineral extraction should be more than 10m from public roads.
  - Mineral extraction should be more than 20m from public rights of way.
  - Mineral extraction should be more than 100m from residential properties and other sensitive receptors.

#### **Assessment**

- 4.2.4 The assessment of environmental constraints demonstrates that:
- The Order Limits include a number of existing roads, namely the A421, the existing A428 and minor roads including the A1198, Potton Road, the B1046 St Neots Road, and St Ives Road.
  - The majority of the Order Limits lie within Flood Zone 1 i.e. an area considered as having a less than 0.1% (1 in 1000) annual probability of flooding from rivers or sea. Part of the Order Limits to the west are within Flood Zones 2 and 3 associated with the River Great Ouse, Dean Ditch, Rockham Ditch and Hen Brook.
  - The Order Limits contain several areas with hedgerows and trees and therefore of potential ecological sensitivity.
  - There are a number of County Wildlife Sites in close proximity to the Order Limits.
  - There are a number of residential properties near to and within the Order Limits.
  - The Order Limits are crossed by overhead power lines to the south-west.
  - A railway line crosses through the Order Limits to the south-west.
  - A number of public rights of way are within the Order Limits.
- 4.2.5 The constraints identified above result in Order Limits that are dissected into parcels of land, with a number of sensitive receptors located close to potential areas of mineral extraction as shown in **Figure 2**. Where minerals are present, prior extraction would therefore require excavation of discrete areas of minerals restricted in size and depth.

- 4.2.6 The main environmental effects arising from prior extraction are considered to be those on:
- a. Landscape and visual amenity
  - b. Biodiversity
  - c. Traffic and transport (including access)
  - d. Noise
  - e. Air quality/dust
  - f. Lighting
  - g. Water resources (hydrology)
  - h. Flood risk.

## 4.3 Mineral Resources

### Cambridgeshire

- 4.3.1 The BGS Mineral Resource Information for Cambridgeshire states that the county “remains an important source of sand and gravel for the construction industry” and that this includes river sand and gravel. The “sands are coarse to fine-grained and have a high but variable gravel content, up to 70% [and are] composed of flint with lesser amounts of quartzite, sandstone and limestone.”
- 4.3.2 The only part of the Order Limits within an MSA in Cambridgeshire is that part of the Order Limits in the vicinity of Hen Brook. The BGS 1:50,000 scale geological map sheet 187 (Huntingdon) identifies sands and gravels within the MSA at Hen Brook. These river terrace gravels are predominantly overlain by alluvial deposits. **Figure 3** Sheet 1 shows the relationship between the part of the MSA for sand and gravel in Cambridgeshire and the Scheme in the vicinity of Hen Brook.
- 4.3.3 The BGS [Ref. 19] holds no online geological information from boreholes along the course of Hen Brook. The Ground Investigation for the Scheme (see **Appendix 9.1** of the Environmental Statement [TR010044/APP/6.3]) identified an average of 1.4 metres of gravelly, sandy clay in the vicinity of Hen Brook in two exploratory boreholes. This suggests that the potential for workable sand and gravel resources in this area is low.

### Bedfordshire

- 4.3.4 The BGS 1:50,000 scale geological map sheet 204 (Biggleswade) shows the sands and gravels within the Order Limits in Bedfordshire to be the First and Second Terraces of the River Great Ouse.

- 4.3.5 The BGS Mineral Resource Information for Bedfordshire confirms that sand and gravel resources in Bedfordshire correspond to the river terrace deposits of the River Great Ouse which have been worked as sand and gravel for aggregate. River terrace deposits are likely to be relatively consistent in terms of particle-size distribution with fewer ‘fines’ (silt and clay) and non-durable gravel than glacial deposits as a result of sorting by water during deposition. The composition of river terrace deposits depends on the nature of the bedrock and glacial units being eroded within the river’s catchment.
- 4.3.6 The MSA for sand and gravel in Bedfordshire generally follows the outcrop of sands and gravels as shown on the geological map. However, the MSA excludes some areas underlain by sand and gravel which are developed, for example at Chawston and Wyboston to the north of the A421. It also extends to some areas which are within the buffer zone for the MSA but which do not contain river sand and gravel resources, in particular land to the east of the River Great Ouse and Black Cat Quarry and the C class road between Tempsford and Little Barford which is underlain by glacial till (Area 3 on **Figure 3**, Sheet 2 and as shown on an extract from the geological map (**Figure 4**).
- 4.3.7 The BGS Mineral Resource Information notes that “River Great Ouse gravels are generally dominated by pebbles of Jurassic limestone and flint derived from glacial deposits. The lateral extent and maximum thickness of river sand and gravel increases downstream, and gravels probably occur beneath the alluvium. [...] The deposits generally do not appear to exceed 3–4m in thickness, and 5m would seem to be exceptional. In many places the sand and gravel may be covered by a thin overburden of silt and clay (alluvium) [...]”
- 4.3.8 **Figure 3** Sheet 2 shows the relationship between the part of the MSA for sand and gravel within Bedfordshire and the Order Limits.
- 4.3.9 Borehole logs held by the BGS [Ref. 19] and a summary of the Ground Investigation for the Scheme (see **Appendix 9.1** of the Environmental Statement [**TR010044/APP/6.3**]) show the thickness of the river terrace deposits within the Order Limits to be variable between 0.7 and 14.6m thick and locally overlain with alluvial clay (average 1.4m thick) and underlain by either glacial till or Oxford Clay. The river terrace deposits in that part of the Scheme within the MSA in vicinity of the existing Black Cat roundabout are thinner at up to 4m thick.
- 4.3.10 The borehole logs show that the river terrace deposits within the MSA at Black Cat Junction consist of sands overlying gravels. Where present, the sands are between 0.25 and 2.5m thick and are fine to coarse with a little gravel and occasional cobbles and are sometimes clayey. The gravels are always present and are between 0.6 and 2.7m thick. They consist of very sandy sub-rounded to sub-angular fine to coarse gravels of flint, sandstone, quartzite and sometimes chalk.

## 4.4 Assessment

### Cambridgeshire

- 4.4.1 The results of the ground investigation for the Scheme suggest that the potential for workable sand and gravel resources in the MSA at Hen Brook is low. In addition, as shown on **Figure 3** (sheet 1), the Hen Brook and its associated qualitative mineral exclusion zone completely cover the MSA within the Order Limits in this area. This means that mineral extraction in this area is not possible regardless of its resource potential due to the risk of damage to Hen Brook. Accordingly, no assessment of resource volume in this location has therefore been undertaken.

### Bedfordshire

- 4.4.2 Policy MSP 11 of the Bedfordshire MWLP:SSP (Ref 2) states that proposals for non-mineral development within MSAs will not be permitted unless it is appropriate and practicable to extract the mineral prior to the development taking place, having regard to the other policies in the MWLP.
- 4.4.3 There is sufficient existing ground investigation information to prove the maximum thickness of the glacial sands and gravels within the MSA for Bedfordshire within the Order Limits. This ground investigation consists of:
- a. Logs of boreholes and trial pits from previous ground investigations which are held by the BGS and can be accessed online (Ref 19)
  - b. Summary of the ground investigation for the Scheme (**Appendix 9.1** of the Environmental Statement [TR010044/APP/6.3])
- 4.4.4 The part of the Scheme which crosses the MSA for sand and gravel in Bedfordshire can be divided into the following areas shown in **Table 4-1** and **Figure 3**.

**Table 4-1 Areas Assessed in Mineral Resource Assessment for Bedfordshire**

Area Assessed		Included in Resource Assessment	Reason for Exclusion
1	Land to SW of the existing Black Cat roundabout	Yes	None
2	Black Cat Quarry	No	Will be worked prior to Scheme development. No extractable mineral.
3	Land to east of River Great Ouse	No	No resource. Within MSA but BGS mapping shows underlain by Glacial Till
4	Underlain by existing development associated with the existing A1 which will be retained under the Scheme.	No	Resource sterilized by existing development

4.4.5 As can be seen from **Table 4-1** the only area which has been found to contain mineral resource in the area of the MSA which extends into the Order Limits is Area 1 to the south west of the existing Black Cat Roundabout. Borrow pits for the Scheme in the vicinity of the existing Black Cat Roundabout are proposed to the east (within the MSA) and to the west (outside of the MSA) (see **Figure 3**). No borrow pit is proposed as part of the Scheme in Area 1 to the south west of the existing Black Cat roundabout.

4.4.6 The geological information reviewed in Section 4.2 and the environmental constraints mapping shown in **Figure 2** enable a high-level calculation to be made of the potential volume of bedrock sand and gravel present within Area 1 (as identified in **Table 4-1**) which could be extracted by prior excavation.

4.4.7 The design parameters used for the assessment were:

- a. Taking into account the environmental buffer zones set out in Section 4.1 the workable area shown on **Figure 3** (Sheet 2, Area 1b) is an approximately rectangular phase of width 175m and length 125m.
- b. Maximum side slopes of 1:2.5 gradient.
- c. A minimum width of 20m for the base of each phase (to allow movement of plant).
- d. Average depth of phases of 5m.
- e. 75% recovery of sand and gravel.
- f. Worked mineral would require on-site processing in the vicinity of the Scheme with discarded mineral placed back within the worked void.

- 4.4.8 This preliminary assessment identified a small potential resource of less than 4,000 m<sup>3</sup> of sand and gravel, representing a tonnage of around 8,000 tonnes (at an assumed as-dug density of 2 tonnes per cubic metre).
- 4.4.9 Given the small size of the workable area and its constrained location between Roxton and the A1/A421 it is not considered capable of being extracted economically. Environmentally, prior extraction is also considered unlikely to be acceptable because access would to pass very close to residential properties or use School Lane, a public right of way. This area was considered insufficiently large for inclusion of the list of potential borrow pits at Black Cat Junction as described in the Borrow Pits Optioneering Report [TR010044/APP/7.6].

## 5 Strategic minerals sites

### 5.1 Introduction

- 5.1.1 This section contains an assessment of the Scheme's impact on the Strategic Mineral Site at Black Cat Quarry in Bedfordshire. There are no other Strategic Mineral Sites within or in the vicinity of the Order Limits for the Scheme.
- 5.1.2 Quarrying operations for sand and gravel have taken place at the Black Cat Quarry, which is sited on land near to the existing Black Cat roundabout on the A1 (Black Cat Quarry, Great North Road, Chawston, Bedfordshire). The central and southern parts of the Black Cat Quarry fall within the Order Limits. Mineral extraction at Black Cat Quarry ceased at the end of 2020, and the existing planning permission requires final restoration of the whole site to be completed by the end of Spring 2021.
- 5.1.3 In their consultation response to the Request for a Scoping Opinion **[TR010044/APP/6.5]** for the Scheme, the Bedfordshire Authorities (Bedford Borough Council and Central Bedfordshire Council ) requested Highways England to assess the environmental impacts from the Scheme against the approved Black Cat Quarry restoration and landscaping scheme (LPA planning reference 17/00462/AOC). As set out above, the Environmental Statement **[TR010044/APP/6.1]** assesses impacts from the Scheme on the basis that the Black Cat Quarry has been restored in advance of the Scheme's construction.

### 5.2 Black Cat Quarry

- 5.2.1 Black Cat Quarry covers an area of 32.8 hectares, to the east of the A1 and the majority of the site is located within the Order Limits (refer to **Figure 3**). Access into the site is gained via a purpose-built arm from the existing Black Cat roundabout. The A1 forms the western and south-western boundary of the site, the River Great Ouse forms the eastern and south-eastern boundary, with an agricultural boundary to the north.
- 5.2.2 Planning permission for sand and gravel extraction and processing was originally granted in 2008, with further permissions granted in 2010 and 2015. Mineral working ceased in 2020.
- 5.2.3 Under the current planning permission, the completion of restoration of land at Black Cat Quarry is required by the end of Spring 2021. The permitted restoration scheme comprises a mix of agricultural land, riverine channels and wet woodland, with floodplain pastures, incorporating the importation of 93,000 tonnes of inert waste.

## 5.3 Assessment

- 5.3.1 Given that Black Cat Quarry is required to be restored in Spring 2021 following completion of extraction of the identified sand and gravel resource in 2020, it is considered that there will be no impact from the Scheme on the operation of Black Cat Quarry as a Strategic Mineral Site. Recoverable mineral has already been extracted from the Black Cat Quarry and the site will now be restored in accordance with the planning permission. The requirements of Policies MSP 1 relating to strategic minerals sites have therefore been met for this site as allocated mineral from the Black Cat Quarry has been extracted.
- 5.3.2 Policy MSP 4 relates to safeguarding existing concrete batching, asphalt and stone coating plants. However, none of these ancillary mineral operations are located at Black Cat Quarry, at other locations within the Order Limits or in close proximity. Therefore, Policy MSP 4 is not relevant to the Scheme.

## 6 Policy tests

### 6.1 Introduction

- 6.1.1 This section examines the degree to which the Scheme satisfies the tests set out in the NPSNN and also the Cambridgeshire County Council and Peterborough City Council MWDP Core Strategy (Ref 1) CS26 and the Central Bedfordshire Council, Bedford Borough Council and Luton Borough Council MWLP:SSP Policies MSP11 and MSP12 (Ref 2).
- 6.1.2 Section 4 has identified the presence of underlying or adjacent mineral resource and has identified two areas of the safeguarded sands and gravel resource that would be affected by the Scheme, one located within the Cambridgeshire area (associated with Hen Brook) and another located in the Bedfordshire area (to the south west of the existing Black Cat roundabout).
- 6.1.3 However, workable sand and gravel resource in the Cambridgeshire MSA at Hen Brook is identified as low and cannot be extracted due to the potential environmental impact on Hen Brook. In Bedfordshire, only one area of mineral resource has been identified in the MSA to the south west of the existing Black Cat roundabout. This is not considered capable of prior extraction given the small size of the workable area and its constrained location between Roxton and the A1/A421, as well as the potential to cause unacceptable effects on nearby residential receptors.

### 6.2 Minerals Safeguarding

#### Requirement for the Scheme

- 6.2.1 Section 3 of this report has identified the need for the Scheme as demonstrated by both local and national policy. The Case for the Scheme [TR010044/APP/7.1] contains a comprehensive planning policy assessment which identifies the key planning considerations and assesses the Scheme against the NPSNN. In summary, the Scheme will deliver the benefits listed below:
- a. Address existing capacity issues and delays along the single carriageway section of the A428 and at Black Cat Junction;
  - b. Improve the strategic road network along the A428 corridor to cope with future traffic growth and add capacity required to support local and regional economic growth which is constrained by poor east/west connectivity;
  - c. Provide time savings of up to 30 minutes and 48% on some peak time journeys;
  - d. Reduce traffic levels on local roads as a result of 'rat running' as drivers seek to avoid congestion on the strategic road network;
  - e. Provide safety improvements to the road network resulting in a reduction on deaths and casualties as a result of road traffic accidents;

- f. Provide an improved and safer network for pedestrians, cyclists and horse riders, including on the single carriageway section of the A428, which would be retained as a local road.

6.2.2 Cambridgeshire County Council has identified transport infrastructure as a significant constraint to growth within Cambridgeshire and Bedfordshire, with the need for improvements to the existing A428 being specifically identified. The Scheme has also been identified as an NSIP that is likely to come forward in the Plan period.

#### **Requirement for sand and gravel**

- 6.2.3 Section 3 also demonstrates that there is no immediate recognised need within either Cambridgeshire, Peterborough or Bedfordshire for additional provision of sand and gravel.
- 6.2.4 The most recently published AMR for Cambridgeshire County Council identifies six allocated sand and gravel sites within Cambridgeshire County Council and Peterborough City Council. The landbank for sand and gravel was reported as 13.8 years, greater than the national target of 7 years, which demonstrates that there is no pressing continual need for further supply to be provided in Cambridgeshire.
- 6.2.5 The most recently published LAA for Central Bedfordshire Council , Bedford Borough Council and Luton Borough Council identifies allocated sand and gravel sites within the Plan area. The landbank for sand and gravel was reported at 8.6 years, greater than the national target of 7 years, which also demonstrates that there is no pressing continual need for further supply to be provided in Bedfordshire.

### **6.3 National Policy Statement for National Networks and Local Policy**

- 6.3.1 Paragraphs 5.169 and 5.182 of the NPSNN state that, “Applicants should safeguard any mineral resources on the proposed site as far as possible” and “Where a proposed development has an impact on a Mineral Safeguarding Area (MSA), the Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to safeguard mineral resources.”
- 6.3.2 In accordance with the NPSNN, this report demonstrates that the Scheme has minimised impacts on mineral resources as far as possible. Where potential impacts on mineral resources have been identified at Hen Brook and to the south west of the existing Black Cat roundabout this report demonstrates that:
- 6.3.3 Those resources are of no economic value or potential value for the purposes of Cambridgeshire County Council and Peterborough City Council MWDP Core Strategy Policy CS26 and Central Bedfordshire Council , Bedford Borough Council and Luton Borough Council MWLP:SSP Policy MSP 12.
- 6.3.4 Prior extraction should not be required as it is neither practicable nor environmentally acceptable, and there is an overriding need for the Scheme in accordance with Cambridgeshire County Council and Peterborough City Council Policy CS26 and Central Bedfordshire Council , Bedford Borough Council and Luton Borough Council MWLP:SSP Policy MSP 12.

## 6.4 Summary

- 6.4.1 The NPSNN and RIS identify that there is a national and overriding need for the Scheme as explained in the Case for the Scheme **[TR010044/APP/7.1]**.
- 6.4.2 Section 4 of this report demonstrates that the identified sand and gravel resources in the MCAs with the potential to be affected by the Scheme have either been shown to be of no economic value or potential value or cannot be extracted due to potential environmental impacts or practical constraints.
- 6.4.3 Section 5 demonstrates that the Scheme will not prejudice the Black Cat Quarry, which has already been worked. Black Cat Quarry is the only Strategic Mineral Site affected by the Scheme. In addition, part of Black Cat Quarry is proposed to be used as a borrow pit for sand and gravel by the Scheme.
- 6.4.4 Therefore it can be concluded that:
- a. The tests in Paragraphs 5.169 and 5.182 in the NPSNN are satisfied.
  - b. The Scheme accords with Cambridgeshire County Council and Peterborough City Council MWDP Core Strategy Policy CS26.
  - c. The Scheme accords with Policy MSP 12 of the MWLP:SSP.

## 7 Conclusions

7.1.1 This report demonstrates the following:

- a. Geological maps and ground investigations undertaken (see **Appendix 9.1** of the Environmental Statement **[TR010044/APP/6.3]**) have identified the existence of the underlying or adjacent mineral resource for sand and gravel within the Order Limits in both Cambridgeshire and Bedfordshire. The Scheme has the potential to affect two areas within MSAs at Hen Brook in Cambridgeshire and to the south west of the existing Black Cat roundabout.
- b. However, in the case of Cambridgeshire the exploratory boreholes at Hen Brook have established that the potential for workable sand and gravel resources in this area is low. Prior extraction of this area would also cause unacceptable environmental impacts on the Hen Brook.
- c. In Bedfordshire, for a small area to the south west of the existing Black Cat roundabout, the Mineral Resource Assessment has established that up to approximately 16,000 m<sup>3</sup> of sand and gravel, representing a tonnage of around 32,000 tonnes (at an assumed as-dug density of 2 tonnes per cubic metre) may be affected. As a result of the small size of this workable area and its constrained location between Roxton and the A1/A421 it is considered not capable of economic extraction. Prior extraction is also considered unlikely to be acceptable because access would be required to pass very close to residential properties or would use School Lane, a public right of way.
- d. The Scheme also extends into the majority of the Black Cat Quarry which is identified as a Minerals Strategic Area. One of the four borrow pits required for the Scheme is sited within the Black Cat Quarry. However, and more importantly, extraction works at the Black Quarry completed in 2020 and the site is pending restoration. Therefore, the Scheme would not prejudice any operations at the Black Cat Quarry.
- e. In addition, the NPSNN identifies that there is a national and compelling need for the Scheme as further explained in the Case for the Scheme **[TR010044/APP/7.1]**. This clearly overrides the very limited effect on the MSAs identified, which Highways England has sought to safeguard as far as possible by crossing the MSAs in Bedfordshire and Cambridgeshire in locations which minimise the impact on safeguarded mineral resources.
- f. An area of in-situ mineral within the Order Limits located to the south of Black Cat Junction, and within the MSA in Bedfordshire, was assessed as being too small in volume for prior extraction to be viable. This area was also considered insufficiently large for inclusion of the list of potential borrow pits at Black Cat Junction as described in the Borrow Pits Optioneering Report **[TR010044/APP/7.6]**.
- g. Therefore, the Scheme therefore fully accords with local planning policy without the need for prior extraction at the two small areas where the Order Limits overlap with the MSA and potential mineral resource has been

identified, at Hen Brook and to the south west of the existing Black Cat roundabout.

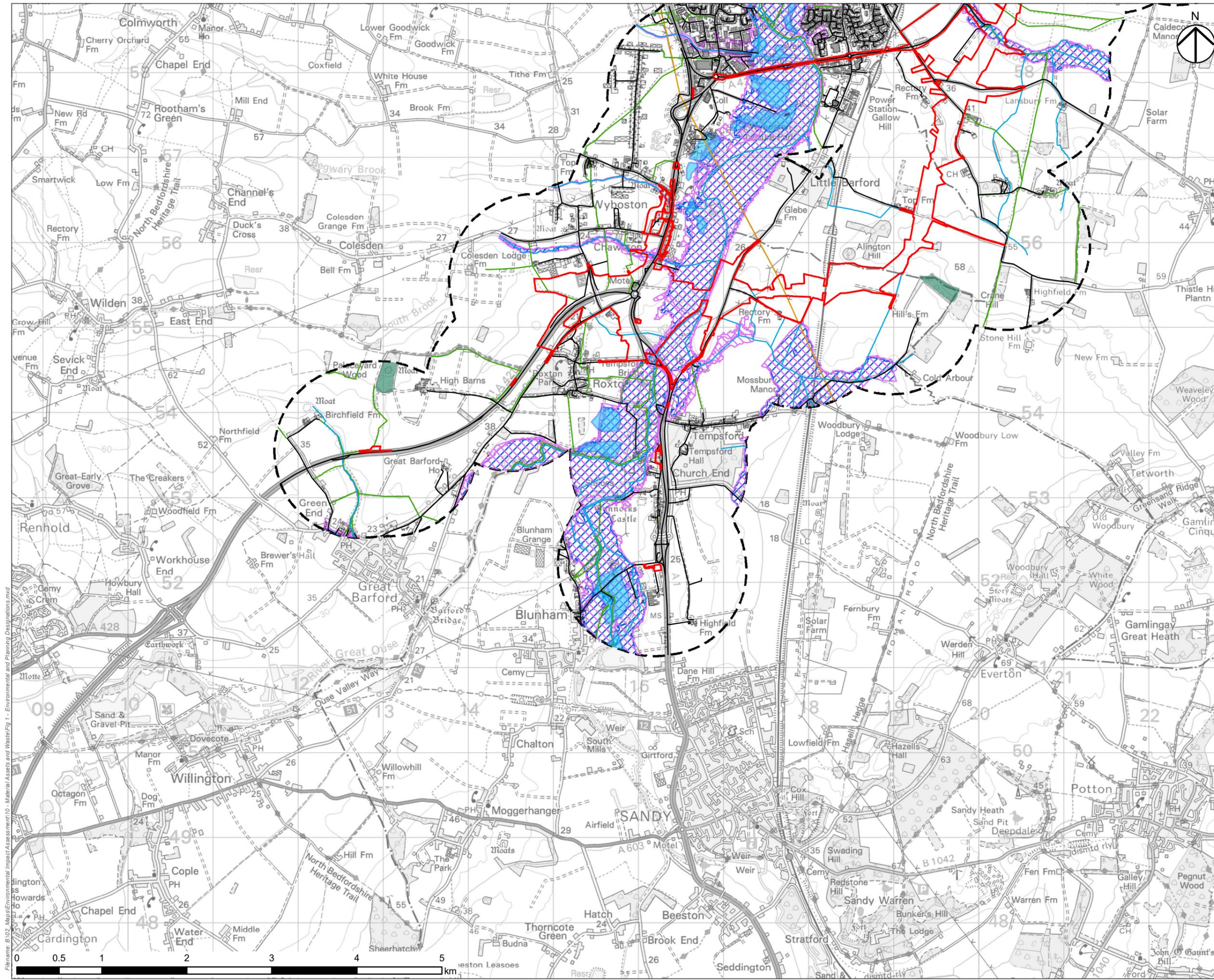
## 8 References

Ref 1	Cambridgeshire and Peterborough Minerals and Waste Development Plan: Core Strategy DPD (2011) <a href="https://www.cambridgeshire.gov.uk/business/planning-and-development/planning-policy/adopted-minerals-and-waste-plan">https://www.cambridgeshire.gov.uk/business/planning-and-development/planning-policy/adopted-minerals-and-waste-plan</a>
Ref 2	Bedford Borough, Central Bedfordshire and Luton Borough Councils Minerals and Waste Local Plan: Strategic Sites and Policies (2014) <a href="https://www.centralbedfordshire.gov.uk/info/48/minerals_and_waste/450/development_framework">https://www.centralbedfordshire.gov.uk/info/48/minerals_and_waste/450/development_framework</a>
Ref 3	National Policy Statement for National Networks. HMSO (2014). <a href="https://www.gov.uk/government/publications/national-policy-statement-for-national-networks">https://www.gov.uk/government/publications/national-policy-statement-for-national-networks</a>
Ref 4	National Planning Policy Framework. Department for Communities and Local Government (2019). <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810197/NPPF_Feb_2019_revised.pdf</a>
Ref 5	Planning Practice Guidance. HMSO (2019). <a href="https://www.gov.uk/government/collections/planning-practice-guidance">https://www.gov.uk/government/collections/planning-practice-guidance</a>
Ref 6	Emerging Cambridgeshire and Peterborough Minerals and Waste Local Plan (November 2019) <a href="https://www.cambridgeshire.gov.uk/business/planning-and-development/planning-policy/emerging-minerals-and-waste-local-plan">https://www.cambridgeshire.gov.uk/business/planning-and-development/planning-policy/emerging-minerals-and-waste-local-plan</a>
Ref 7	British Geological Survey, Mineral Safeguarding in England good practice advice (2011). British Geological Survey. <a href="https://webapps.bgs.ac.uk/data/publications/pubs.cfc?method=viewRecord&amp;publnId=19866913">https://webapps.bgs.ac.uk/data/publications/pubs.cfc?method=viewRecord&amp;publnId=19866913</a>
Ref 8	British Geological Survey: Mineral Resource Information in support of National, Regional and Local Planning Cambridgeshire (comprising Cambridgeshire and the City of Peterborough) (2003). British Geological Survey. <a href="https://www2.bgs.ac.uk/downloads/start.cfm?id=2565">https://www2.bgs.ac.uk/downloads/start.cfm?id=2565</a>
Ref 9	British Geological Survey: Mineral Resource Information for Development Plans Bedfordshire: Resources and Constraints (1995). British Geological Survey. <a href="https://www2.bgs.ac.uk/downloads/start.cfm?id=2563">https://www2.bgs.ac.uk/downloads/start.cfm?id=2563</a>
Ref 10	British Geological Survey: A Guide to Mineral Safeguarding in England (2007). British Geological Survey. <a href="http://nora.nerc.ac.uk/7508/">http://nora.nerc.ac.uk/7508/</a>
Ref 11	Mineral Safeguarding Areas (Information provided by British Geological Survey, Cambridgeshire County Council, Peterborough City Council and consultation) (updated November 2009) (not available online)

Ref 12	Cambridgeshire Aggregates (Minerals) Local Plan (1991) (not available online)
Ref 13	Cambridgeshire and Peterborough Minerals and Waste Development Plan Site Specific Proposals Development Plan Document (2012) <a href="https://www.cambridgeshire.gov.uk/asset-library/imported-assets/SSPAoption120208Web1.pdf">https://www.cambridgeshire.gov.uk/asset-library/imported-assets/SSPAoption120208Web1.pdf</a>
Ref 14	Mineral Safeguarding Areas – Technical Note on the production of Mineral Resource Assessments (November 2016). Central Bedfordshire Council and Bedford Borough Council. <a href="https://www.centralbedfordshire.gov.uk/migrated_images/mineral-safeguarding-areas_tcm3-20290.pdf">https://www.centralbedfordshire.gov.uk/migrated_images/mineral-safeguarding-areas_tcm3-20290.pdf</a>
Ref 15	The Planning Act (2008). HMSO (2008). <a href="http://www.legislation.gov.uk/ukpga/2008/29/contents">http://www.legislation.gov.uk/ukpga/2008/29/contents</a>
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Ref 17	Central Bedfordshire and Bedford Borough Councils Minerals and Waste Planning Monitoring Report (2015) <a href="https://www.centralbedfordshire.gov.uk/migrated_images/monitoring-report_tcm3-2137.pdf">https://www.centralbedfordshire.gov.uk/migrated_images/monitoring-report_tcm3-2137.pdf</a>
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Ref 19	Borehole records shown on Geology of Britain viewer. British Geological Survey. <a href="http://mapapps.bgs.ac.uk/geologyofbritain/home.html?">http://mapapps.bgs.ac.uk/geologyofbritain/home.html?</a>

## List of Figures

- Figure 1: Environmental Designations
- Figure 2: Environmental Constraints
- Figure 3: Minerals Safeguarding Areas
- Figure 4: Geological Map: Black Cat Junction

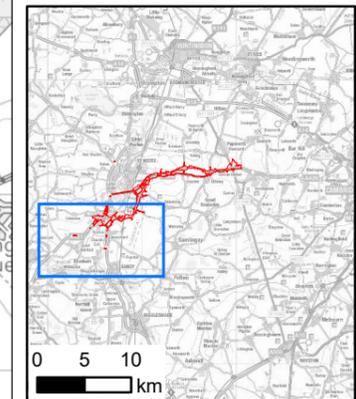


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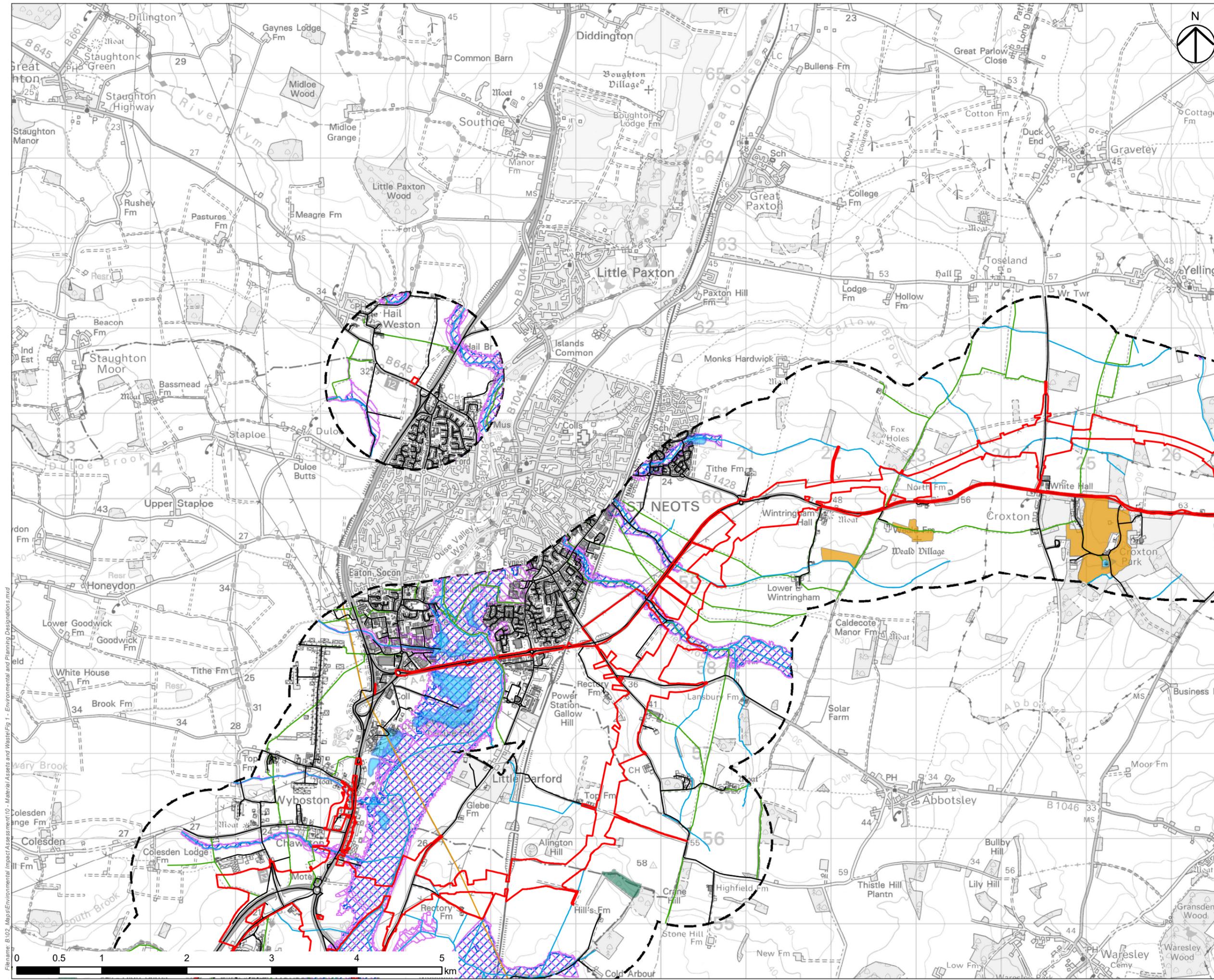
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- Order Limits
- Study Area
- Road
- River
- Public Right of Way
- National Grid Overhead Cables
- Building
- Scheduled Monument
- Ancient Woodland
- Waterbody
- Flood Zone 2
- Flood Zone 3



FIRST ISSUE	NS	LH	26/02/2021	P01
Revision Details	By	Check	Date	Suffix
Purpose of Issue	<b>DCO APPLICATION</b>			
Client	Highways England Woodlands Marston Lane Marston Industrial Estate Bedford MK41 7LW			
Development Consent Order Number	<b>TR010044</b>			
Project Title	<b>A428 BLACK CAT TO CAXTON GIBBET IMPROVEMENTS</b>			
Drawing Title	<b>APPENDIX 10.1 FIGURE 1 SHEET 1 OF 3 ENVIRONMENTAL AND PLANNING DESIGNATIONS</b>			
Designed JC	Drawn NS	Checked LH	Approved JG	Date 26/02/2021
Internal Project No 60541541	Suitability D7		Zone	
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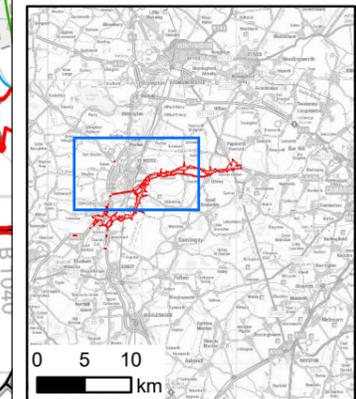


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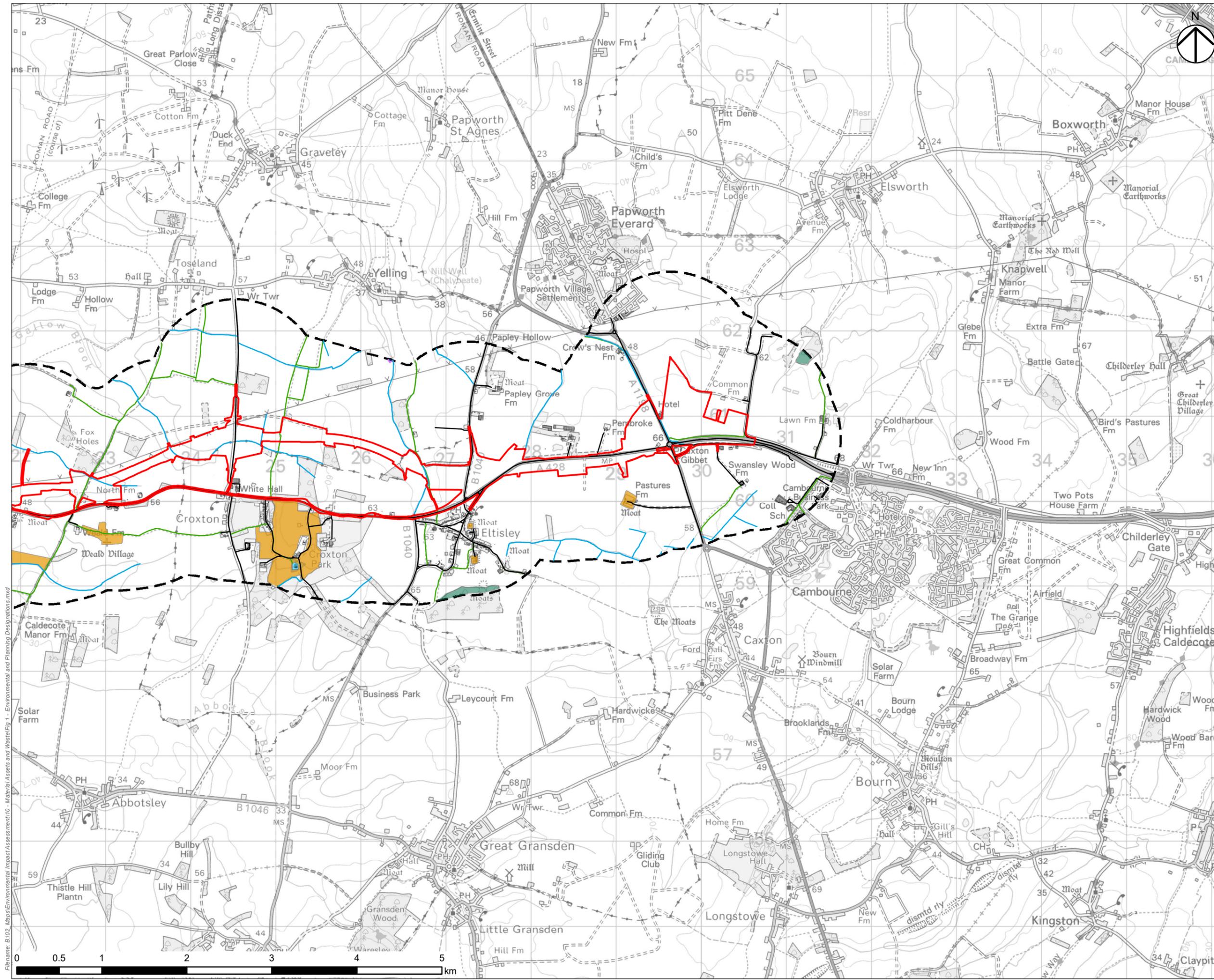
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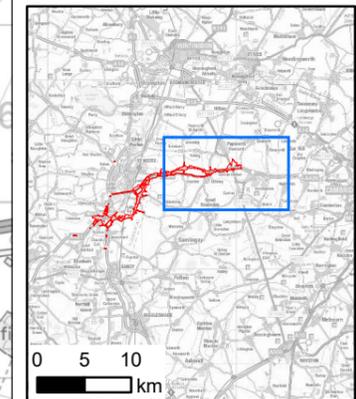
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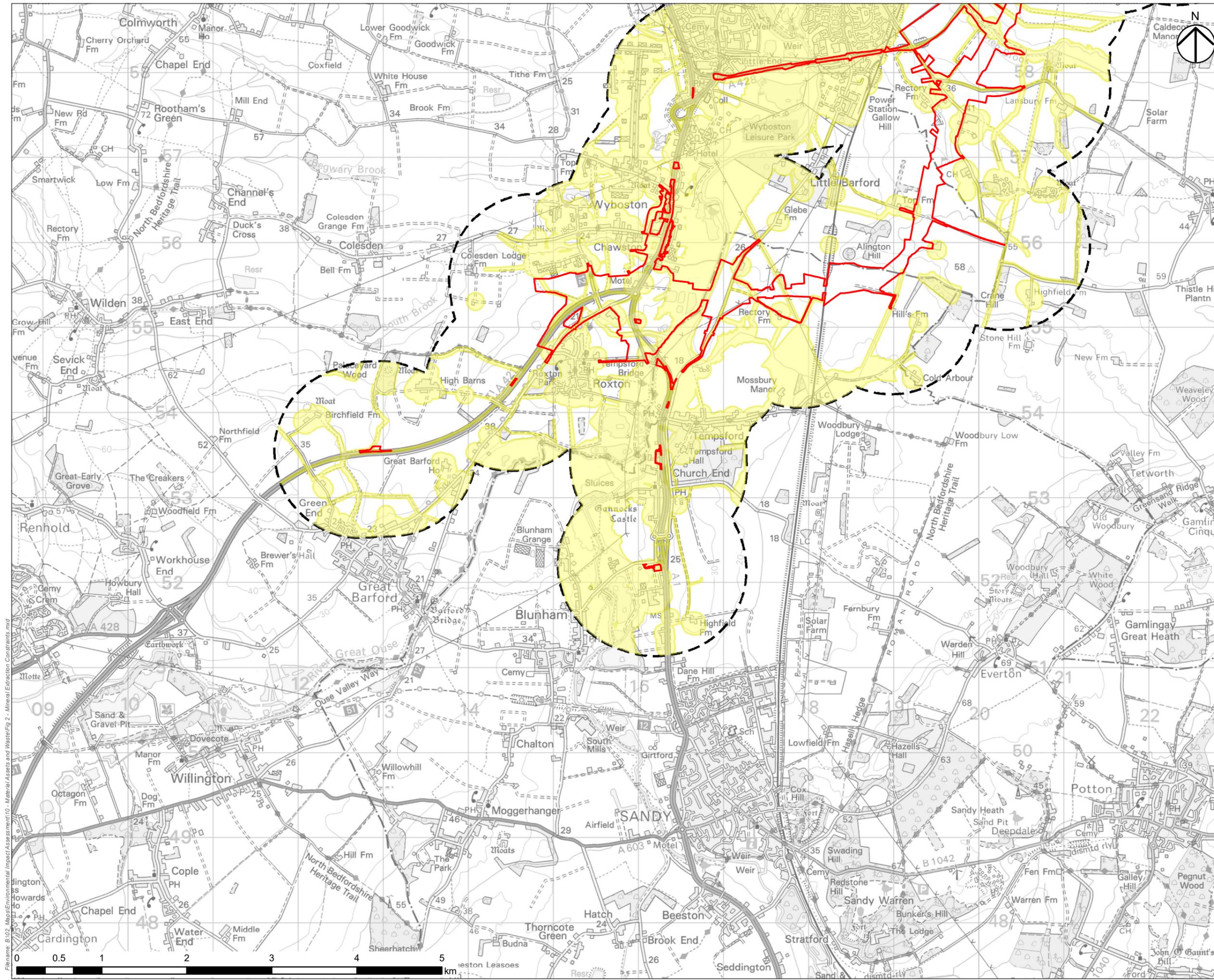
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GEN_Z_Z_ZZ	-GS-GI-	-0078		
Location	Type	Role	Number	

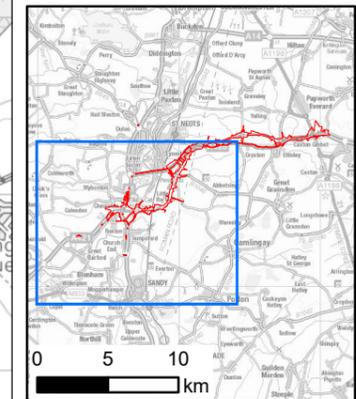
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NOTES  
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REGULATION 5(2)(A)  
**LEGEND**

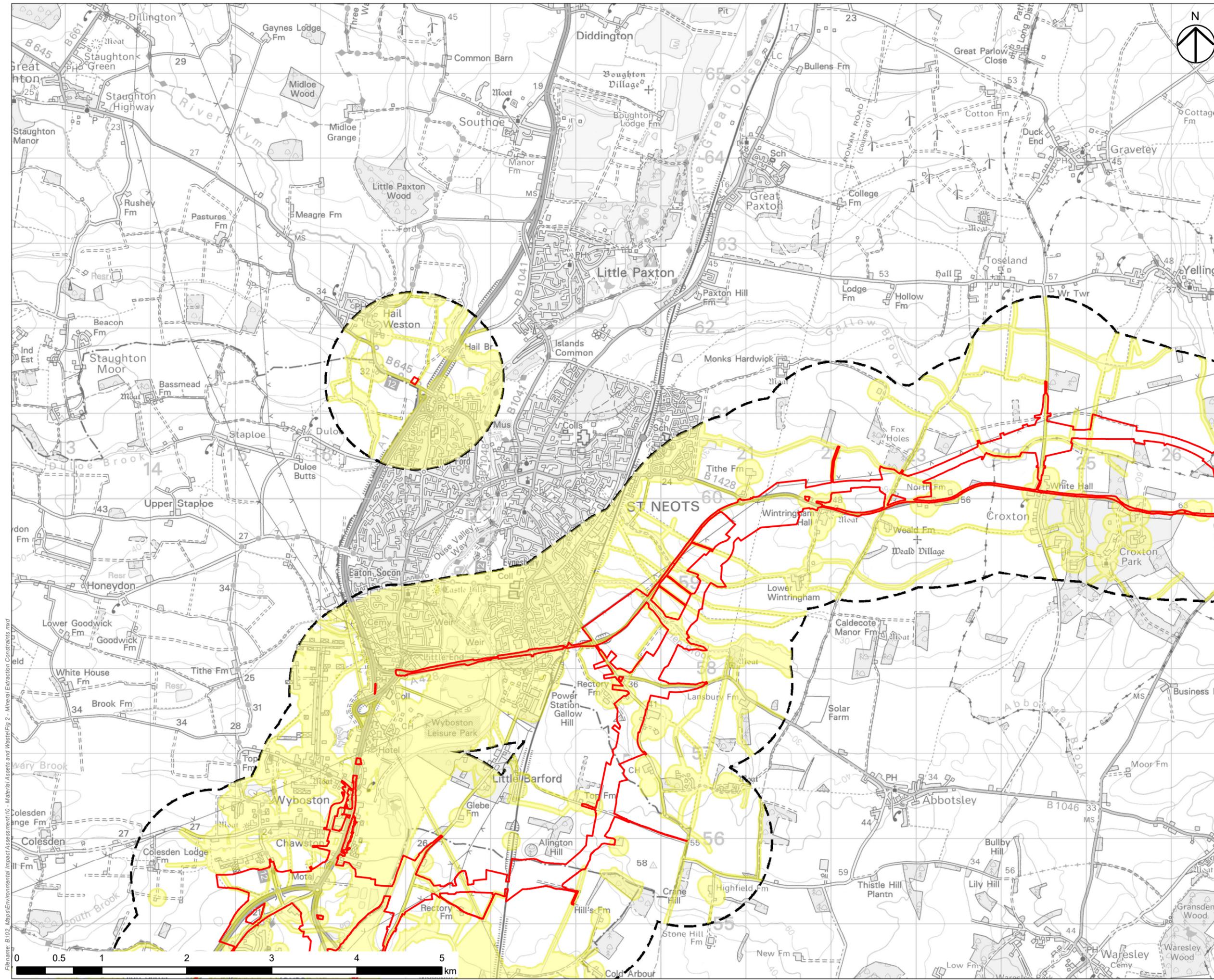
- Order Limits
- Study Area
- Mineral Extraction Exclusion Zone



FIRST ISSUE	NS	LH	26/02/2021	P01
Revision Details	By	Check	Date	Suffix
Purpose of Issue				
<b>DCO APPLICATION</b>				
Client				
Highways England				
Woodlands				
Manton Lane				
Bedford				
MK41 7LW				
Development Consent Order Number				
<b>TR010044</b>				
Project Title				
<b>A428 BLACK CAT TO CAXTON GIBBET IMPROVEMENTS</b>				
Drawing Title				
<b>APPENDIX 10.1 FIGURE 2 SHEET 1 OF 3 MINERAL EXTRACTION CONSTRAINTS</b>				
Designed	Drawn	Checked	Approved	Date
IC	NS	LH	JG	26/02/2021
Internal Project No			Suitability	
60541541			D7	
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GEN_Z_Z_Z_Z		-GS-GI	-0079	
Location	Type	Role	Number	

Filename: B:\02\_Maps\Environmental Impact Assessment\10 - Mineral Assets and Waste\Fig 2 - Mineral Extraction Constraints.mxd

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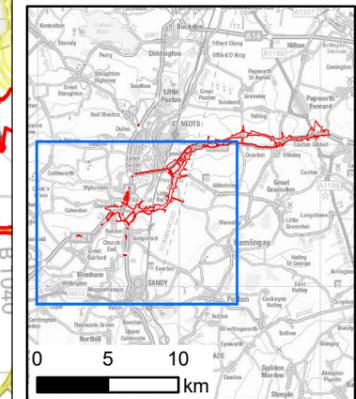


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REGULATION 5(2)(A)

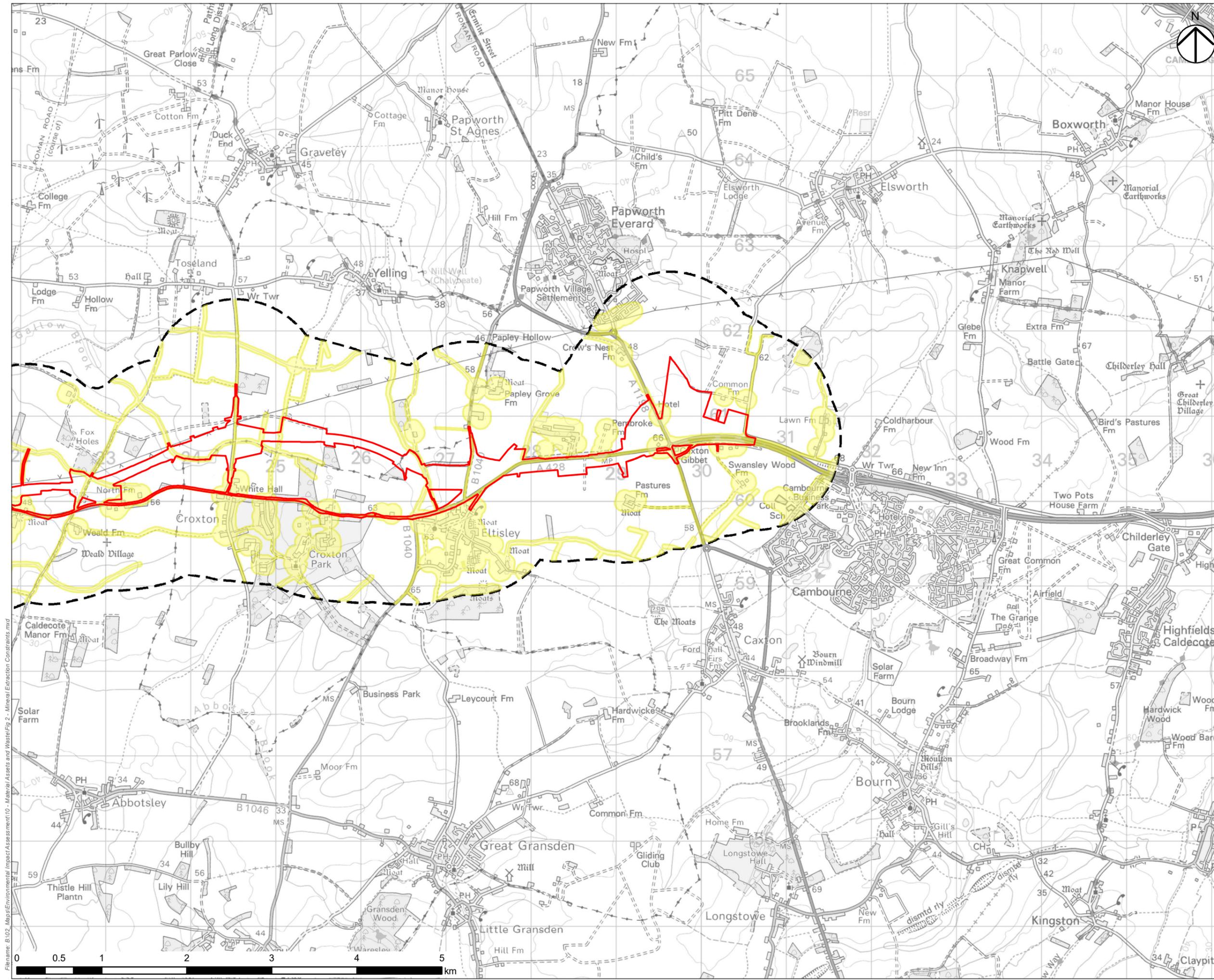
**LEGEND**

- Order Limits
- Study Area
- Mineral Extraction Exclusion Zone

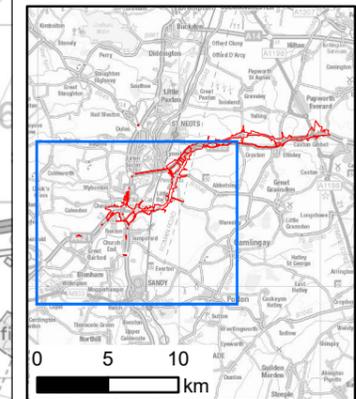


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Revision Details	By	Check	Date	Suffix
Purpose of Issue	DCO APPLICATION			
Client	Highways England Woodlands Marston Lane Marston Industrial Estate Bedford MK41 7LW			
Development Consent Order Number	TR010044			
Project Title	A428 BLACK CAT TO CAXTON GIBBET IMPROVEMENTS			
Drawing Title	APPENDIX 10.1 FIGURE 2 SHEET 2 OF 3 MINERAL EXTRACTION CONSTRAINTS			
Designed	Drawn	Checked	Approved	Date
JC	NS	LH	JG	26/02/2021
Internal Project No	Suitability		Zone	
60541541	D7			
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Location	Type	Role	Number	

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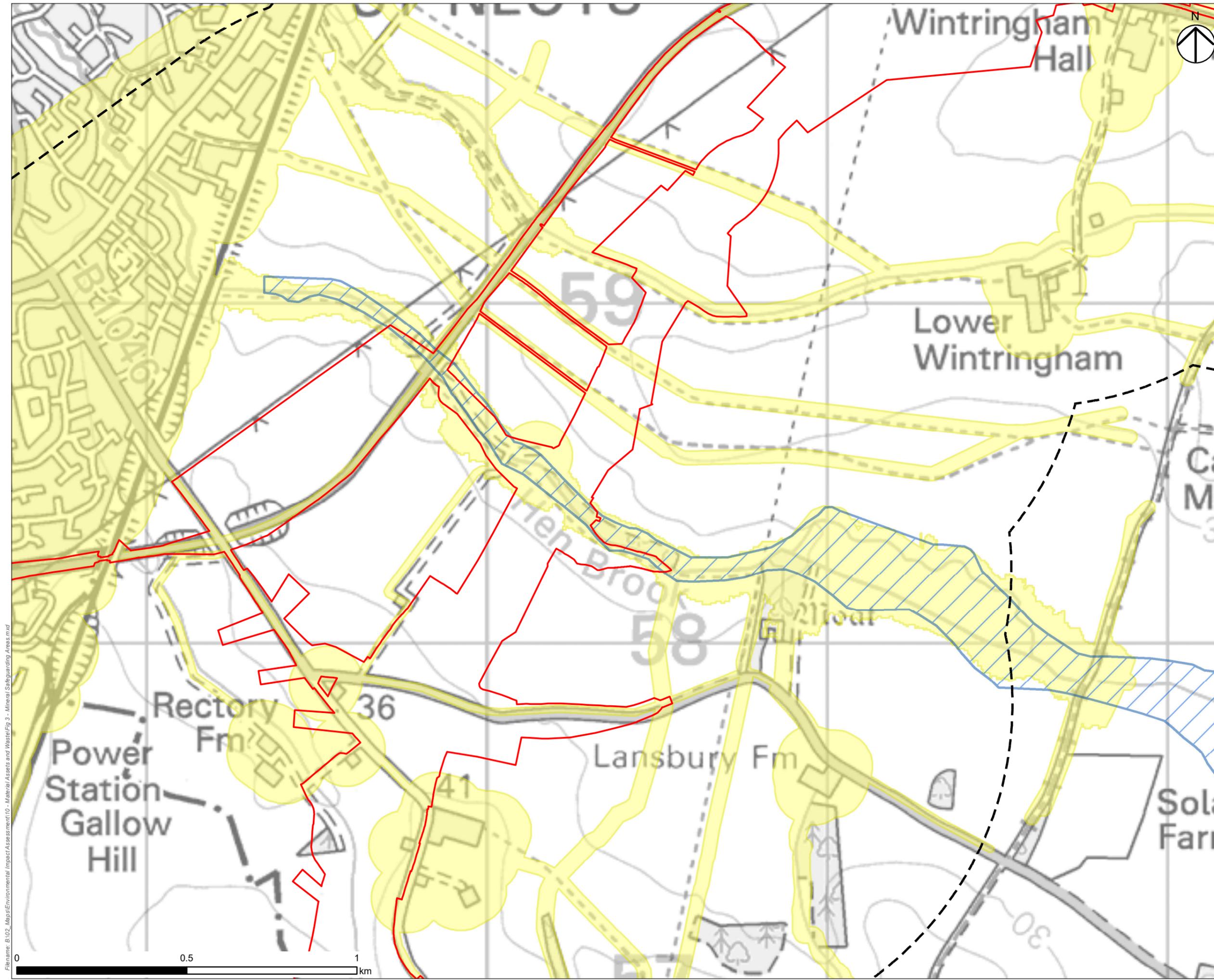


NOTES  
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 REGULATION 5(2)(A)  
**LEGEND**  
 Order Limits  
 Study Area  
 Mineral Extraction Exclusion Zone



Filename: B:\02\_Maps\Environmental Impact Assessment\10 - Mineral Assets and Waste\Fig 2 - Mineral Extraction Constraints.mxd

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Purpose of Issue	DCO APPLICATION			
Client	Highways England Woodlands Marston Lane Marston Industrial Estate Bedford MK41 7LW			
Development Consent Order Number	TR010044			
Project Title	A428 BLACK CAT TO CAXTON GIBBET IMPROVEMENTS			
Drawing Title	APPENDIX 10.1 FIGURE 2 SHEET 3 OF 3 MINERAL EXTRACTION CONSTRAINTS			
Designed	Drawn	Checked	Approved	Date
IC	NS	LH	JG	26/02/2021
Internal Project No	Sustainability		Date	
60541541	D7			
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Location	Type	Role	Number	

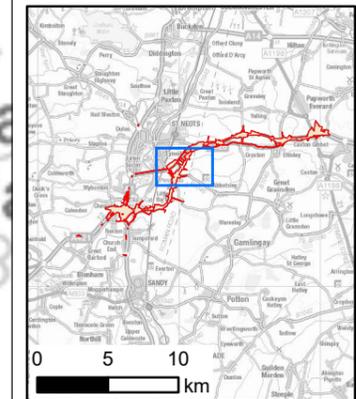


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REGULATION 5(2)(A)

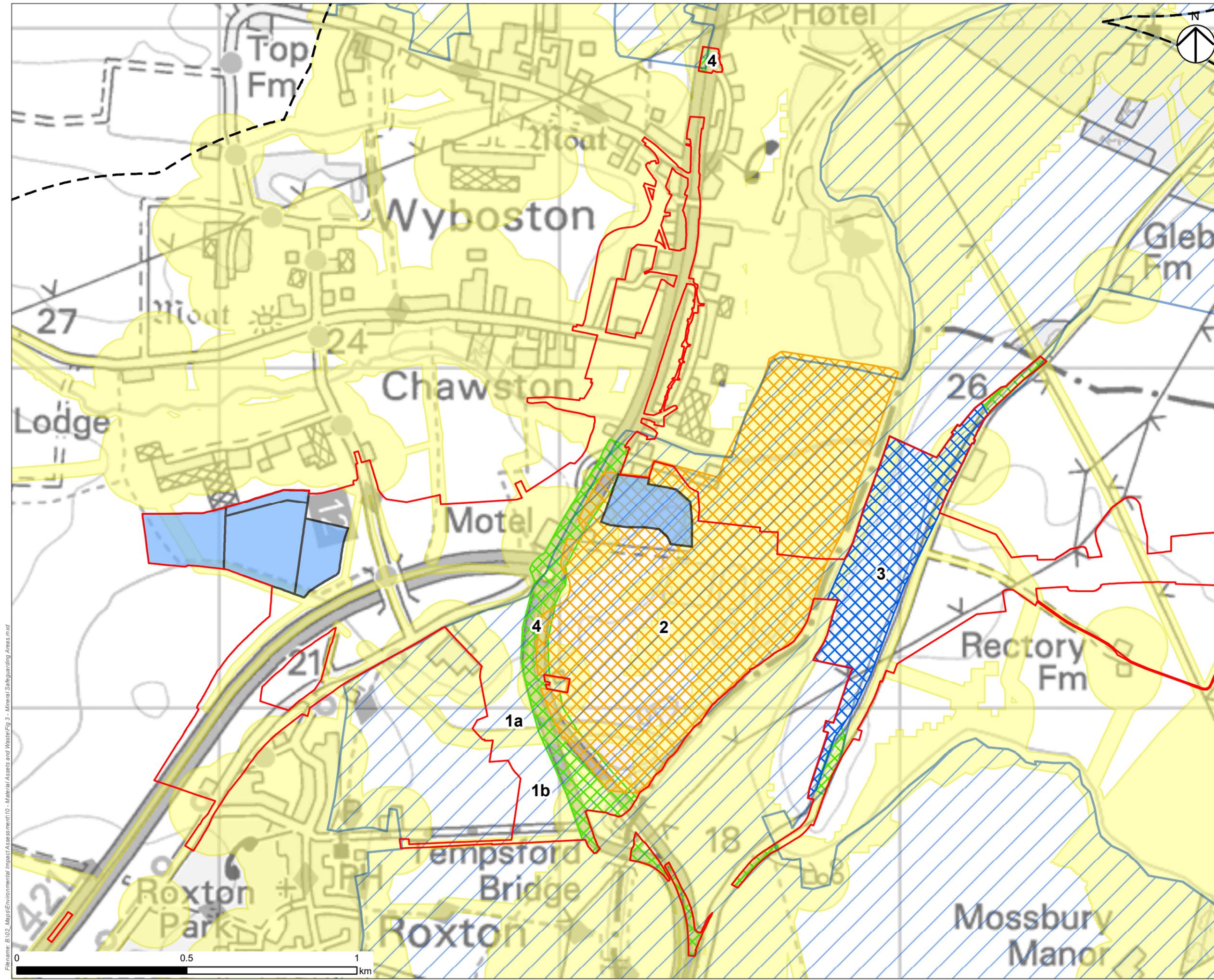
**LEGEND**

- Order Limits
- Study
- Mineral Safeguarding Areas (Sand and Gravel)
- Mineral Extraction Exclusion Zone
- Mineral Extracted (Black Cat Quarry)



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Purpose of Issue					
DCO APPLICATION					
Client					
Highways England Woodlands Manton Lane Manton Industrial Estate Bedford MK41 7LW					
					
Development Consent Order Number					
TR010044					
Project Title					
A428 BLACK CAT TO CAXTON GIBBET IMPROVEMENTS					
Drawing Title					
APPENDIX 10.1 FIGURE 3 SHEET 1 OF 2 MINERAL SAFEGUARDING AREAS - CAMBRIDGESHIRE					
Designed	Drawn	Checked	Approved	Date	
NS	NS	LH	JG	26/02/2021	
Internal Project No			Suitability		
60541541			D7		
Scale @ A3			Zone		
1:10,000					
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HE551495		-ACM		-EGN-	
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Location	Type	Role	Number	Rev	

Filename: B:\02\_Maps\Environmental Impact Assessment\10 - Mineral Assets and Waste\Fig 3 - Mineral Safeguarding Areas.mxd

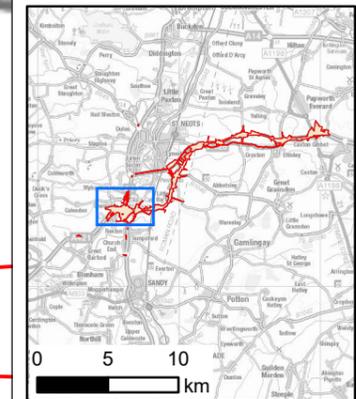


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REGULATION 5(2)(A)

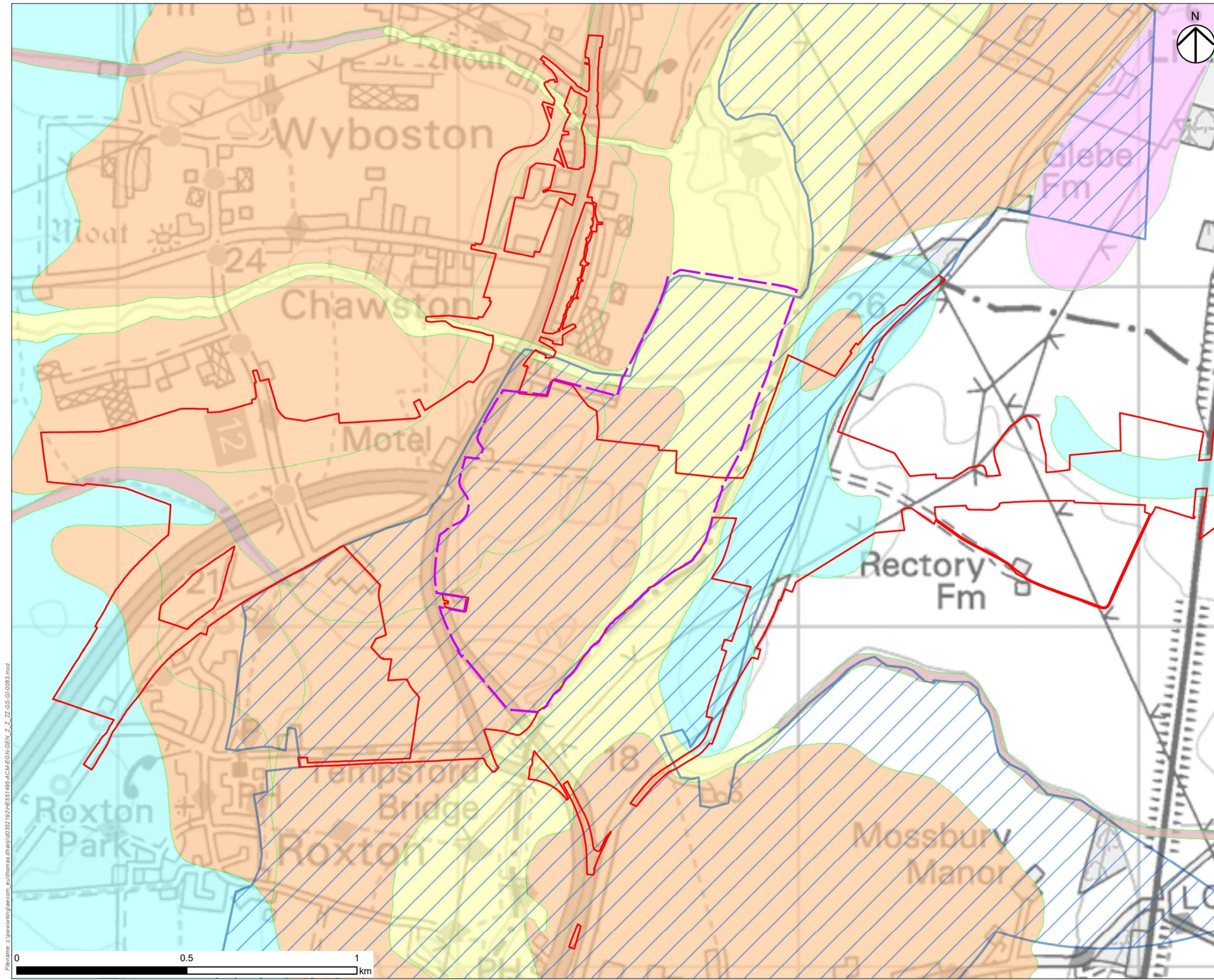
**LEGEND**

- Order Limits
- Study
- Borrow Pit
- Mineral Safeguarding Areas (Sand and Gravel)
- Mineral Extraction Exclusion Zone
- Mineral Extracted (Black Cat Quarry)
- No Mineral (BGS Mapping)
- Sterilised by Existing Development

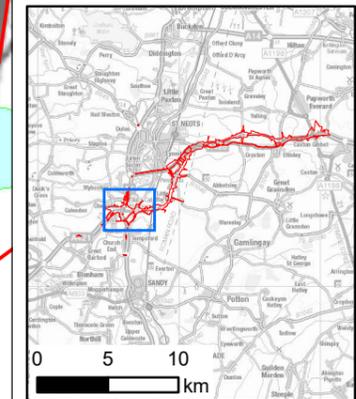


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Revision Details	By	Check	Date	Suffix
Purpose of Issue	DCO APPLICATION			
Client	Highways England Woodlands Marston Lane Marston Industrial Estate Bedford MK41 7LW			
Development Consent Order Number	TR010044			
Project Title	A428 BLACK CAT TO CAXTON GIBBET IMPROVEMENTS			
Drawing Title	APPENDIX 10.1 FIGURE 3 SHEET 2 OF 2 MINERAL SAFEGUARDING AREAS - BEDFORDSHIRE			
Designed	Drawn	Checked	Approved	Date
NS	NS	LH	JG	26/02/2021
Internal Project No	Suitability		Date	
60541541	D7			
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Location	Type	Role	Number	

Filename: B:\02\_Maps\Environmental Impact Assessment\10 - Mineral Assets and Waste\Fig 3 - Mineral Safeguarding Areas.mxd



- NOTES  
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- REGULATION 5(2)(A)
- LEGEND**
- Order Limits
  - Study Area
  - Black Cat Quarry Application Boundary
  - Mineral Safeguarding Areas (Sand and Gravel)
- Superficial Geology**
- Alluvium - Clay, Silt, Sand and Gravel
  - Glaciofluvial Deposits - Sand and Gravel
  - River Terrace Deposits - Sand and Gravel
  - Oadby Member - Diamicton
  - Drift Geology Not Mapped



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Purpose of Issue  
**DCO APPLICATION**

Client  
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Manton Industrial Estate  
Bedford  
MK41 7LW

Development Consent Order Number  
**TR010044**

Project Title  
**A428 BLACK CAT TO CAXTON GIBBET IMPROVEMENTS**

Drawing Title  
**APPENDIX 10.1  
FIGURE 4  
GEOLOGICAL MAP  
BLACK CAT JUNCTION**

Designed NS	Drawn NS	Checked LH	Approved JG	Date 26/02/2021
Internal Project No 60541541			Suitability D7	
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