



# TECHNICAL NOTE

<b>DATE:</b>	25 September 2023	<b>CONFIDENTIALITY:</b>	Public
<b>SUBJECT:</b>	Proposed temporary cabin: review of potential ecological constraints		
<b>PROJECT:</b>	Spherical Tokamak for Energy Production (UK Atomic Energy Authority)	<b>AUTHOR:</b>	Glenn Richards
<b>CHECKED:</b>	Susan Field	<b>APPROVED:</b>	Glenn Richards

## INTRODUCTION

### BACKGROUND

West Burton in North Nottinghamshire has been selected as the location for the Spherical Tokamak for Energy Production (STEP) plant. The STEP site is at approximate National Grid Reference (NGR) SK800 863, near the village of Bole in North Nottinghamshire. It is adjacent to the west bank of the River Trent and includes West Burton A (WBA) and West Burton C (WBC); it also envelopes West Burton B (WBB), which is outside of the site boundary. West Burton A is currently being decommissioned and is a demolition site.

The UKAEA is carrying out a programme of environmental investigations, which will inform the emerging STEP site layout and the planning process, as well as the management of environmental constraints during early site characterisation work. The investigations will begin to develop the environmental baselines that underpin the Environmental Impact Assessment (EIA) and Development Consent Order (DCO) application.

### THIS TECHNICAL NOTE

As part of the early preparatory/enabling works UKAEA proposes to install a temporary cabin within the STEP site. The temporary cabin ('the Proposed Development') will contain office space, meeting rooms, a locker room, shower and toilet facilities and a kitchenette/canteen.

The site of the proposed cabin ('the Site') is within the southern part of the wider STEP site<sup>1</sup>. The Site boundary is marked on drawing reference **19706 THPW XX XX DR A 101**. The Site is to be released to UKAEA as gravel and hardstanding, without built or temporary structures.

UKAEA has instructed a WSP Ecologist to review the biodiversity information collected to date, as part of the characterisation of the wider STEP site, to identify any potential ecological constraints on the installation of the temporary cabin.

<sup>1</sup> The site of the Proposed Development (temporary cabin) is referred to as '*the Site*', distinguishing it from '*the wider STEP site*'.



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## REVIEW OF ECOLOGICAL CONSTRAINTS

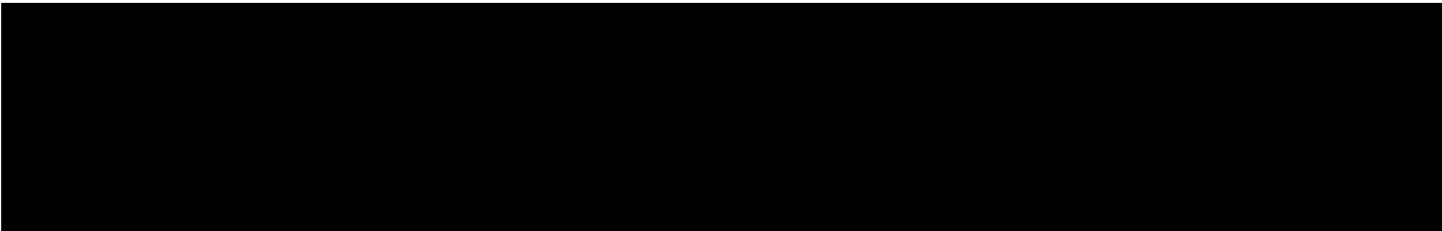
### BIODIVERSITY CONSERVATION SITES

A desk-based study of the biodiversity of the wider STEP site was carried out in 2023. There are no statutory or non-statutory biodiversity conservation sites within or bordering the Site. The nearest statutory biodiversity conservation site is Lea Marsh SSSI, which is over 2km to the north-east. This SSSI is notified for improved floodplain meadow and wet pasture, which supports nationally scarce plant species. Snipe (*Gallinago gallinago*) and curlew (*Numenius arquata*) occasionally breed on the SSSI and Water vole (*Arvicola Amphibius*) has been recorded from perimeter ditches. The nearest non-statutory biodiversity conservation site is West Burton Reedbed Local Wildlife Site (LWS), which is over 250m to the north-east and designated for reedbed habitat. The Proposed Development will be entirely within existing gravel and hardstanding and is likely to have no effects on biodiversity conservation sites.

### HABITATS & PLANTS

The wider STEP site was subject to habitat survey in 2023, employing the UK Habitats classification. The Site and bordering areas are hardstanding and gravel (developed land; sealed surface). The Proposed Development is therefore likely to result in no loss of, or damage to, other habitats.

### FAUNA



#### BATS

Monthly bat activity surveys of the wider Step site were carried out between May and July 2023 inclusive, employing manual transect surveys using hand-held bat detectors/recorders and static detector deployment, with the recorded bat activity analysed using specialist computer software (BatExplorer). The recorded bat activity was attributable to common pipistrelle (*Pipistrellus pipistrellus*); soprano pipistrelle (*Pipistrellus pygmaeus*); Nathusius' pipistrelle (*Pipistrellus Nathusii*); Pipistrellus species; noctule bat (*Nyctalus noctula*); Leisler's bat (*Nyctalus leisleri*); Nyctalus species; brown long-eared bat (*Plecotus auritus*); and Myotis species.

It is understood that the Site is to be released to UKAEA as gravel and hardstanding, without built or temporary structures. There will therefore be no loss or disturbance of bat roost habitat. The Site and



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bordering areas are hard standing and gravel, which are poor bat foraging habitats. The Site is within an operational area of the wider STEP site that is already well-illuminated. The addition of limited additional security lighting associated with the Proposed Development is likely to have negligible effect on the status of bat assemblages. The Proposed Development is therefore likely to have a negligible effect on the conservation status of bat populations/assemblages.

## OTTER AND WATER VOLE

Otter (*Lutra lutra*) and water vole surveys throughout the wider STEP site in 2023 did not record any confirmed evidence of otter or water vole activity. The waterbodies within 250m of the Site are poor otter and water vole habitat. The Proposed Development is therefore likely to have no effects on otter and/or water vole.

## BIRDS

The Site is a small area of hard standing and gravel in an operational area of the wider STEP site. The Proposed Development will be completed outside of the birds' breeding season. The proposed development is also likely to result in negligible disturbance of non-breeding bird assemblages, with hedgerows to the south of the Site screening the works from adjacent fields.

## GREAT CRESTED NEWT

Great crested newt (*Triturus cristatus*) presence/absence surveys throughout the wider STEP site were completed in 2023. The closest waterbody to the Site that supports great crested newt is over 250m to the south-east of the Site. Great crested newts commonly occupy terrestrial habitats within 250m of their breeding locations (waterbodies/ponds). This species is therefore unlikely to disperse onto the Site, also recognising that the Site is hardstanding/gravel and lacks great crested newt habitats. It is therefore likely that the Proposed Development will have no effects on great crested newt.

## REPTILES

Grass snake (*Natrix helvetica*) are known to occur within the wider STEP site. The Site however lacks reptile habitats, being entirely hard standing and gravel. The Proposed Development is therefore likely to have no effects on grass snake or other reptile species.

## OTHER SPECIES

Whilst the habitats surrounding the Site have the potential to support other legally protected species or species of importance for biodiversity conservation, the Proposed Development is within and bordered by hard standing and gravel. There is therefore likely to be a negligible effect on other species of biodiversity conservation importance.



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## CONCLUSION AND RECOMMENDATIONS

### CONCLUSIONS

The Proposed Development includes the installation of a temporary cabin within the south of the wider STEP site. The Site is to be released to UKAEA as gravel and hardstanding, without built or temporary structures. The Proposed Development will not result in loss of habitat and will have no effect on designated biodiversity conservation sites. The Proposed Development is also likely to have either no effect, or a negligible effect, on [REDACTED] bats, otter, water vole, birds, great crested newts, reptiles and other species/taxa of biodiversity conservation importance.

### RECOMMENDATIONS

A number of precautionary working practices are to be implemented to further limit the risk of adverse effects on ecological features:

Speed limits are to be restricted to a safe and practicable minimum in accordance with existing site rules, with drivers remaining vigilant and avoiding collisions with wildlife, for example (not limited to [REDACTED] and hedgehog).

Noise and vibration are to be kept to the practicable minimum, avoiding unnecessary revving of engines and/or unnecessary impacts between plant/equipment and the ground surface.

Where practicable, excavations to be backfilled or securely sealed (e.g. boards with edges sealed with sand) and pipework capped/covered at the end of each working day; alternatively a means of escape for trapped fauna provided (e.g. gradually sloping sides, or robust ramps (roughened) that extend from the base of the excavation up to the ground surface).

Any temporary lighting during the works will be minimised and directed into the site.

Lighting associated with the completed development will be the minimum that is reasonably required for safety and security and will wherever practicable be motion-activated and directed into the Site, avoiding light trespass outside the Site.

Materials will be stored in designated areas within the Site, well away from vegetation, and in a manner that does not create temporary refugia for fauna, for example compacted or raised off the ground (e.g. on pallets or in skips).

In the event potential wildlife refugia are created, for example accumulation of surplus materials (e.g. metal, plastic, timber), these are to be removed under the supervision of an Ecologist.

Standard, good practice pollution prevention measures are to be employed.



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No invasive non-native species have been recorded near to the Site and import/export of earth/substrates is not anticipated, which would require appropriate biosecurity protocols to be in place to avoid spreading non-native species.

In the event that the Proposed Development is delayed until spring, a site visit by an ornithologist may be required to verify that nesting birds will not be disturbed, particularly species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), such as peregrine (*Falco peregrinus*) and black redstart (*Phoenicurus ochruros*).

Site staff and contractors are to remain alert to the potential presence of a range of fauna. In the event a protected/notable/important species is encountered, or suspected to be present, the Principal Contractor will suspend work and consult an ecologist before work resumes.

The Principal Contractor will also consult an Ecologist in the event of any uncertainty regarding the effects of site work on ecological features.