# A428 Black Cat to Caxton Gibbet improvements

TR010044

Volume 9

**9**.41 Joint Position Statement with Natural England and the Local Authorities on Drainage Ponds

Planning Act 2008

Rule 8(1)(k)

Infrastructure Planning (Examination Procedure) Rules 2010

October 2021

Infrastructure Planning

Planning Act 2008

**The Infrastructure (Examination Procedure) Rules 2010**

# A428 Black Cat to Caxton Gibbet improvements

Development Consent Order 202[ ]

## 9.41 Joint Position Statement with Natural England and the Local Authorities on Drainage Ponds

| | |
|---|---|
| **Regulation Reference:** | Rule 8(1)(k) |
| **Planning Inspectorate Scheme Reference** | TR010044 |
| **Application Document Reference** | TR010044/EXAM/9.41 |
| **Author** | A428 Black Cat to Caxton Gibbet improvements Project Team, National Highways |

| Version | Date | Status of Version |
|---|---|---|
| Rev 1 | 5 October 2021 | Deadline 3 |

# Table of contents



## Table of Tables

# 1 Introduction

1.1.1 This Joint Position Statement (the Statement) has been produced to address Action 2 of Issue Specific Hearing (ISH) 3 **[EV-043]** (held 24 September 2021), which required the "*Applicant, NE and Local Authorities (LA) to provide position statement on details of drainage ponds, including intended design principles and planting arrangements*".

1.1.2 The Applicant has prepared a Joint Statement with the following interested parties:

a. Natural England.

b. Bedford Borough Council

c. Central Bedfordshire Council

d. The Cambridgeshire Authorities (Cambridgeshire County Council, Huntingdonshire District Council and South Cambridgeshire District Council).

1.1.3 The content of this Statement has been developed by the Applicant and then shared with Natural England and the Local Authorities on 29 September 2021 and formed the basis of discussions held with the Local Authorities on 30 September 2021[1], the purpose of which was to confirm their respective positions on the matters set out in the Statement.

1.1.4 This information was further updated after the discussions held on 30 September and returned to Natural England and the Local Authorities for further review and input into the Statement on 4 October 2021.

1.1.5 A full recording of the meeting between the Applicant and the Local Authorities was made available to the Local Authorities and Natural England on 4 October 2021, and a copy of the meeting minutes was shared with the Local Authorities on 4 October 2021.

1.1.6 On 4 October 2021, Natural England confirmed they had reviewed the information provided (that day) and were satisfied with the design principles and planting arrangements for the attenuation basins and had no further comments to make.

1.1.7 The positions of the Applicant, Natural England and the Local Authorities are set out in **Table 1-1** of this document.

1 Natural England was invited to attend the meeting; however, the organisation responded by email on 24 September 2021 stating that it was happy to defer to the local authorities on planting schemes and did not intend to attend. They also communicated they could provide a quick review and lend support to any agreed details.

**Table 1-1. Joint Position Statement between the host authorities, the Applicant and Natural England at Deadline 3 (05 October 2021)**

| The Applicant | Natural England | Cambridgeshire County Council (inc. HDC and SCDC) | Bedford Borough Council | Central Bedfordshire Council |
|---|---|---|---|---|
| The drainage ponds for the Scheme have been designed as part of the wider drainage design to mitigate significant impacts upon the water environment from the Scheme regarding surface water runoff. Further information on the drainage ponds including the design criteria, catchments areas, proposed collection and conveyance systems, attenuation requirements and water quality measures are presented as part of the application in Appendix 13.2 Drainage Strategy Report **[APP 219]**. | Natural England are satisfied with the design principles and planting arrangements for the attenuation basins and have no further comments to make. | A copy of the statement was shared with Cambridgeshire County Council (inc. HDC and SCDC) on 04 October 2021 for input, awaiting response. | Bedford Borough Council are satisfied with the design principles and planting arrangements for the attenuation basins and have no further comments to make. | A copy of the statement was shared with Central Bedfordshire Council on 04 October 2021 for input, awaiting response. |
| The Applicant agrees to integrate the planting principles and planting scheme into a technical | Natural England are satisfied with the design principles and planting arrangements for the | A copy of the statement was shared with Cambridgeshire County Council (inc. HDC and | Bedford Borough Council are satisfied with the design principles and planting arrangements for | A copy of the statement was shared with Central Bedfordshire Council on |

| The Applicant | Natural England | Cambridgeshire County Council (inc. HDC and SCDC) | Bedford Borough Council | Central Bedfordshire Council |
|---|---|---|---|---|
| note to inform the examination of changes to the Landscape and Ecological Management Plan (LEMP), Annex L of the First Iteration Environmental Management Plan **[APP-234]**, presented as part of Annex A of this position statement. | attenuation basins and have no further comments to make. | SCDC) on 04 October 2021 for input, awaiting response. | the attenuation basins, and have no further comments to make. | 04 October 2021 for input, awaiting response. |

# Annex A – Details of attenuation basins including intended design principles and planting arrangements.

Introduction

To further progress the joint position statement which was requested by the ExA as Action 2 of Issue Specific Hearing 3 (Date 24 September 2021) **[EV-043]**, which stated:

> *The Applicant/Natural England/Local Authorities to provide a position statement on details of drainage ponds, including intended design principles and planting arrangements*

A technical note proposing the design principles and planting arrangements was circulated to the Local Authorities on 29 September 2021 and was the subject of a discussion held with the Local Authorities on 30 September 2021.

The technical note has been amended following the discussion to include information about the location of the ponds which will require wet treatment zones, further information on the percentages of species proposed in the species mixes proposed and information on management.

Attenuation Basin Wet Treatment Zones

The drainage design allows for both wet and dry treatment areas, these are presented as part of the Engineering Section Drawings Part 1 (Drainage Layouts) **[APP-017]**. The catchments which have been identified as requiring both wet and dry treatment zones have been identified as part of the Scheme in the HEWRAT assessment **[APP-218]**, in Table 1-1. The parts of the table which relate to wet treatment areas have been reproduced in this technical note (Table A, which also includes the name of the receiving watercourse to give a geographical context for the information provided). The remaining nine ponds are dry treatment areas. All 18 ponds are shown on the Environmental Masterplan **[APP-091]**.

**Table A – Extract of Table 1-1 identifying wet treatment ponds and the names of highway catchment, outfall and receiving watercourse**

| Network Number | Highway Catchment | Outfall | Receiving watercourse |
|---|---|---|---|
| 2 | Existing A421 Pond | Existing A421 Pond Outfall | Rockham Ditch, tributary of the River Great Ouse |
| 3 | Pond BC1 | Pond BC1 Outfall | Rockham Ditch, tributary of the River Great Ouse |
| 5 | Pond BC3 | Pond BC3 Outfall | An existing ditch (RGO1), which drains into the River Great Ouse |

| Network Number | Highway Catchment | Outfall | Receiving watercourse |
|---|---|---|---|
| 10 | Rectory Farm Pond | Rectory Farm Outfall | Stone Brook tributary (StB2), tributary of the River Great Ouse |
| 11 | Railway Pond | Railway Pond Outfall | An existing watercourse (StB5), flows south into Stone Brook |
| 15 | Wintringham Brook Tributary West Pond | Wintringham Brook Tributary West Outfall | Wintringham Brook Tributary |
| 16 | Wintringham Brook Tributary East Pond | Wintringham Brook Tributary East Outfall | Wintringham Brook Tributary |
| 17 | Gallow Brook Pond | Gallow Brook Outfall | Gallow Brook |
| 18 | West Brook Tributary Pond | West Brook Tributary Outfall | West Brook Tributary (WstB2) |

Design principles

The attenuation basins have been designed as open areas that collect rainwater and runoff from the hard surfaces of the Scheme and allow this to either percolate into the ground or be directed to the drainage system in a controlled manner.

The attenuation basins are likely to be naturally colonised by vegetation. However, to ensure rapid coverage of bare soil by vegetation for the purposes of flood risk management, soil stabilisation and an increase in biodiversity and visual amenity, the following sets out an indicative list of species appropriate to the local context of the Scheme area that will be sown as seed or planted.

The following design principles have informed planting arrangements:

- Use of locally native plant species, assemblages and communities;
- Vegetation to be low growing so as not to impinge on the primary flood risk function of the attenuation basins, and suitable to be managed through mowing (though most will die back in winter);
- No tree or shrub planting;
- Small patches of bare ground to be included and allowed to colonise naturally;
- Planting to mimic vegetation communities found within natural ecosystems (naturalistic) to meet ecological and visual aspirations;
- Species to tolerate a variety of soil types;
- The soil environment will range from dry (bank top) to wet (attenuation basin wet treatment zone) with periods of periodic inundation; and
- The angle of the slope of the basin sides is less than about 45 degrees as above this the ground will probably be too steep to successfully establish and maintain wildflower turf through mowing.

The management of the vegetation of the attenuation basins will be undertaken to maintain a relatively stable community in the long-term, and to avoid areas naturally progressing into tall, dense, grass-dominated areas.

Management Measures

Measures will focus on a forward regime of:

a. Mowing once, annually with arisings raked into piles and left in situ for seven days before collection and removal to an off-site green waste composting facility.
b. Visual inspections during the growing season.
c. Control of undesirable injurious weeds to prevent colonisation and domination of the grassland using a selective herbicide.

Vegetation may be left for a year or more between cuts to provide dense ground level cover for fauna, including amphibians, small mammals and invertebrates. The results of annual monitoring surveys will be used to adjust the management regime to maximise biodiversity.

Planting arrangements

The Landscape and Ecological Masterplan (herein referred to as LEMP) (Annex L of the First Iteration Environmental Management Plan **[APP-234]**) states that the Principal Contractor will establish attenuation basins, ditches and other watercourses in a manner that achieves a dense and even sward using species including perennial ryegrass (*Lolium perenne*), creeping bent (*Agrostis stolonifera*) and rushes (species of *Juncus*) which are relatively tolerant to salt, and tolerant to wet conditions and periodic inundation.

As the water regime in any given area or any given year will be unclear until sometime after the basins have been created, three broad plant mixes will be deployed: one on the drier basin slopes, one on the temporarily wetter basin floors and one for wet treatment zones.

*Drier basin slopes*

In addition to perennial ryegrass, creeping bent and rushes, a suitable grassland species mix for the basin slopes is Emorsgate EM8 meadow mixture (other suppliers are available) which contains species suitable for seasonally wet soils and is based on the vegetation of traditional floodplain (i.e. soil may be underwater for short periods in winter, but are usually well drained in summer). Tables B and C give information about the species composition and percentages for grasses and flowering species for the EM8 plant mix.

Table B – Percentage components for grass species for EM8 plant mix

| Latin name | Common name | Percentage of mix |
|---|---|---|
| *Agrostis capillaris* | Common Bent | 10 |
| *Alopecurus pratensis* | Meadow Foxtail (w) | 3 |
| *Anthoxanthum odoratum* | Sweet Vernal-grass (w) | 3 |
| *Briza media* | Quaking Grass (w) | 3 |
| *Cynosurus cristatus* | Crested Dogstail | 24 |
| *Deschampsia cespitosa* | Tufted Hair-grass (w) | 2 |
| *Festuca rubra* | Red Fescue | 32 |
| *Hordeum secalinum* | Meadow Barley (w) | 3 |
| Total | | 80 |

Table C – Percentage components for flower species for EM8 plant mix

| Latin name | Common name | Percentage of mix |
|---|---|---|
| *Angelica sylvestris* | Wild Angelica | 0.1 |
| *Betonica officinalis - (Stachys officinalis)* | Betony | 0.1 |
| *Centaurea nigra* | Common Knapweed | 0.5 |
| *Filipendula ulmaria* | Meadowsweet | 1 |
| *Leontodon hispidus* | Rough Hawkbit | 0.1 |
| *Leucanthemum vulgare* | Oxeye Daisy - (Moon Daisy) | 2 |
| *Lotus corniculatus* | Birdsfoot Trefoil | 0.1 |
| *Medicago lupulina* | Black Medick | 2.2 |
| *Plantago lanceolata* | Ribwort Plantain | 3 |
| *Primula veris* | Cowslip | 0.5 |

| Latin name | Common name | Percentage of mix |
|---|---|---|
| *Prunella vulgaris* | Selfheal | 3 |
| *Ranunculus acris* | Meadow Buttercup | 3 |
| *Ranunculus bulbosus* | Bulbous Buttercup | 0.5 |
| *Rhinanthus minor* | Yellow Rattle | 1.5 |
| *Rumex acetosa* | Common Sorrel | 0.2 |
| *Silaum silaus* | Pepper Saxifrage | 1 |
| *Silene flos-cuculi - (Lychnis flos-cuculi)* | Ragged Robin | 0.5 |
| *Succisa pratensis* | Devil's-bit Scabious | 0.1 |
| *Taraxacum officinale* | Dandelion | 0.5 |
| *Thalictrum flavum* | Common Meadow-rue | 0.1 |
| Total | | 20 |

For greater diversity, the following species could be discussed for inclusion at detailed design:

- Yarrow (*Achillea millefolium*)
- Sneezewort (*Achillea ptarmica*)
- Greater knapweed (*Centaurea scabiosa*)
- Lady's bedstraw (*Galium verum*)
- Meadow cranesbill (*Geranium pratense*)
- Common cat's-ear (*Hypochaeris radicata*)
- Meadow vetchling (*Lathyrus pratensis*)
- Greater bird's-foot-trefoil (*Lotus pedunculatus*)
- Great burnet (*Sanguisorba officinalis*)
- Compact rush (*Juncus conglomeratus*)
- Toad rush (*Juncus bufonius*)
- Soft rush (*Juncus effusus*)
- Autumn hawkbit (*Scorzoneroides autumnalis*)

*Temporarily wetter basin floors*

A suitable grassland species mix for the basin slopes is Emorsgate EM8 meadow mixture (other suppliers are available), for the basin floors is Emorsgate EP1 pond edge mix which contains species suitable for seasonally wet areas. Tables C and D give information about the species composition and percentages for grass and flower species for the EP1 plant mix.

Table C – Percentage components for grasses species for EP1 plant mix

| Latin name | Common name | Percentage of mix |
|---|---|---|
| *Agrostis capillaris* | Common Bent | 10 |
| *Alopecurus pratensis* | Meadow Foxtail (w) | 3 |
| *Anthoxanthum odoratum* | Sweet Vernal-grass (w) | 3 |
| *Briza media* | Quaking Grass (w) | 3 |
| *Cynosurus cristatus* | Crested Dogstail | 26 |
| *Deschampsia cespitosa* | Tufted Hair-grass (w) | 2 |
| *Festuca rubra* | Red Fescue | 28 |
| *Schedonorus pratensis (Festuca pratensis)* | Meadow Fescue | 5 |
| Total | | 80 |

Table D – Percentage components for flower species for EP1 plant mix

| Latin name | Common name | Percentage of mix |
|---|---|---|
| *Angelica sylvestris* | Wild Angelica | 0.2 |
| *Centaurea nigra* | Common Knapweed | 0.5 |
| *Filipendula ulmaria* | Meadowsweet | 2 |
| *Geum urbanum* | Wood Avens | 0.1 |
| *Heracleum sphondylium* | Hogweed | 0.5 |
| *Iris pseudacorus* | Yellow Iris | 0.1 |

| Latin name | Common name | Percentage of mix |
|---|---|---|
| *Leucanthemum vulgare* | Oxeye Daisy - (Moon Daisy) | 2.4 |
| *Lycopus europaeus* | Gypsywort | 0.1 |
| *Lysimachia vulgaris* | Yellow Loosestrife | 0.1 |
| *Lythrum salicaria* | Purple Loosestrife | 0.2 |
| *Plantago lanceolata* | Ribwort Plantain | 2.5 |
| *Prunella vulgaris* | Selfheal | 3.5 |
| *Pulicaria dysenterica* | Common Fleabane | 0.1 |
| *Ranunculus acris* | Meadow Buttercup | 3.5 |
| *Rumex acetosa* | Common Sorrel | 0.1 |
| *Silene dioica* | Red Campion | 3.5 |
| *Silene flos-cuculi - (Lychnis flos-cuculi)* | Ragged Robin | 0.5 |
| *Thalictrum flavum* | Common Meadow-rue | 0.1 |
| Total | | 20 |

For greater diversity, the following species could be discussed for inclusion at detailed design:

- Common spike-rush (*Eleocharis palustris*)
- Jointed rush (*Juncus articulatus*)
- Greater bird's-foot trefoil (*Lotus pedunculatus*)
- Water mint (*Mentha aquatica*)
- Water forget-me-not (*Myosotis scorpioides*)
- Lesser spearwort (*Ranunculus flammula*)
- Devil's-bit scabious (*Succisa pratensis*)

*Wet treatment zones in attenuation basin treatment trains*

The LEMP states that wetland species to be planted in more permanently wet treatment zones will include amphibious bistort (*Persicaria amphibia*), pendulous sedge (*Carex pendula*) and rushes (*Juncus inflexus* and *Juncus effusus*). It is recommended that although reed canary-grass (*Phalaris arundinacea*) is included, this species should be

allowed to colonise naturally as if planted at the outset it could become dominant very quickly at the expense of a number of the other species.

Other suitable species for the permanent wetland areas of attenuation basin floors will include:

- Water plantain (*Alisma plantago-aquatica*)
- Flowering rush (*Butomus umbellatus*)
- Common water starwort (*Callitriche stagnalis*)
- Tufted sedge (*Carex elata*)
- Rigid hornwort (*Ceratophyllum demersum*)
- Water horsetail (*Equisetum fluviatile*)
- Water-violet (Hottonia palustris)
- Yellow iris (Iris pseudacorus)
- Water mint (*Mentha aquatica*)
- Water forget-me-not (*Myosotis scorpioides*)
- Curled pondweed (*Potamogeton crispus*)
- Broad-leaved pondweed (*Potamogeton natans*)
- Common water-crowfoot (Ranunculus aquatilis)