

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

November 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
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Version	Date	Status of Version
Rev 1	5 October 2021	Deadline 3
Rev 2	4 November 2021	Deadline 4

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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 on 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 accordingly prepared this 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 was initially developed by the Applicant and then shared with Natural England and the Local Authorities on 29 September 2021, and subsequently formed the basis of discussions held with the Local Authorities on 30 September 2021¹, 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 Revision 1 of the Statement submitted on 5 October 2021 at Deadline 3 of the Examination [REP3-026].
- 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 it had reviewed the information provided (that day) and was satisfied with the design principles and planting arrangements for the attenuation basins and had no further comments to make. Bedford Borough Council also communicated that they were satisfied on 4 October 2021.
- 1.1.7 Following Deadline 3 of the Examination, a further request to the Cambridgeshire Authorities and Central Bedfordshire Council was made by the Applicant for input into the Statement.
- 1.1.8 The positions of the Applicant, Natural England and the Local Authorities are set out in **Table 1-1**.

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 4 (4 November 2021)

The Applicant	Natural England	Cambridgeshire County Council (inc. HDC and SCDC)	Bedford Borough Council	Central Bedfordshire Council
<p>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].</p> <p>In response to the comment from the Cambridgeshire Authorities, Pond 83</p>	<p>Natural England is satisfied with the design principles and planting arrangements for the attenuation basins and has no further comments to make.</p>	<p>A copy of the statement was shared with Cambridgeshire County Council (inc. HDC and SCDC) on 4 October 2021 for input.</p> <p>On 25 October 2021, the Cambridgeshire authorities made the following comment:</p> <ul style="list-style-type: none"> The Local Authorities require clarity about how attenuation pond 83 will be restored to mitigate the permanent habitat loss. 	<p>Bedford Borough Council is satisfied with the design principles and planting arrangements for the attenuation basins and has no further comments to make.</p>	<p>A copy of the Statement was shared with Central Bedfordshire Council on 4 October 2021 for input, awaiting response.</p> <p>A follow up request was made by the Applicant on 22 October 2021 for a response from Central Bedfordshire Council. A response is awaited.</p>

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The Applicant	Natural England	Cambridgeshire County Council (inc. HDC and SCDC)	Bedford Borough Council	Central Bedfordshire Council
remains unchanged by the Scheme.				
<p>The Applicant agrees to integrate the planting principles and planting scheme into a technical 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.</p> <p>In response to the comment from the Cambridgeshire Authorities, it is assumed that this is referring to the existing Pond 83, and hence as Pond 83 remains unchanged by the Scheme, no changes to Annex A are required.</p>	<p>Natural England is satisfied with the design principles and planting arrangements for the attenuation basins and has no further comments to make.</p>	<p>A copy of the Statement was shared with Cambridgeshire County Council (inc. HDC and SCDC) on 4 October 2021 for input.</p> <p>On 25 October 2021, the Cambridgeshire Authorities made the following comment:</p> <ul style="list-style-type: none"> The Local Authorities request that Annex A be updated with the proposed enhancements to the existing pond. 	<p>Bedford Borough Council is satisfied with the design principles and planting arrangements for the attenuation basins and has no further comments to make.</p>	<p>A copy of the Statement was shared with Central Bedfordshire Council on 4 October 2021 for input, awaiting response.</p> <p>A follow up request was made by the Applicant on 22 October 2021 for a response from Central Bedfordshire Council. A response is awaited.</p>

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

Introduction

To further progress the Joint Position Statement requested by the ExA as Action 2 of Issue Specific Hearing 3 (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, the percentages of species proposed in the species mixes proposed, and future management, as described in the following sections.

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 that table which relate to wet treatment areas have been reproduced in **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
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 indicative list of species appropriate to the local context presented in **Tables B – E** will be sown as seed or planted.

The following design principles have informed planting arrangements:

- a. Use of locally native plant species, assemblages and communities.
- b. 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).
- c. No tree or shrub planting.
- d. Small patches of bare ground to be included and allowed to colonise naturally.
- e. Planting to mimic vegetation communities found within natural ecosystems (naturalistic) to meet ecological and visual aspirations.
- f. Species to tolerate a variety of soil types.
- g. The soil environment will range from dry (bank top) to wet (attenuation basin wet treatment zone) with periods of periodic inundation.
- h. 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

Management 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) contained within 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** provide 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
<i>Agrostis capillaris</i>	Common Bent	10
<i>Alopecurus pratensis</i>	Meadow Foxtail (w)	3
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass (w)	3
<i>Briza media</i>	Quaking Grass (w)	3
<i>Cynosurus cristatus</i>	Crested Dogstail	24
<i>Deschampsia cespitosa</i>	Tufted Hair-grass (w)	2
<i>Festuca rubra</i>	Red Fescue	32
<i>Hordeum secalinum</i>	Meadow Barley (w)	3
Total		80

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

Latin name	Common name	Percentage of mix
<i>Angelica sylvestris</i>	Wild Angelica	0.1
<i>Betonica officinalis</i> - (<i>Stachys officinalis</i>)	Betony	0.1
<i>Centaurea nigra</i>	Common Knapweed	0.5
<i>Filipendula ulmaria</i>	Meadowsweet	1
<i>Leontodon hispidus</i>	Rough Hawkbit	0.1
<i>Leucanthemum vulgare</i>	Oxeye Daisy - (Moon Daisy)	2
<i>Lotus corniculatus</i>	Birdsfoot Trefoil	0.1
<i>Medicago lupulina</i>	Black Medick	2.2
<i>Plantago lanceolata</i>	Ribwort Plantain	3
<i>Primula veris</i>	Cowslip	0.5
<i>Prunella vulgaris</i>	Selfheal	3
<i>Ranunculus acris</i>	Meadow Buttercup	3
<i>Ranunculus bulbosus</i>	Bulbous Buttercup	0.5
<i>Rhinanthus minor</i>	Yellow Rattle	1.5
<i>Rumex acetosa</i>	Common Sorrel	0.2
<i>Silaum silaus</i>	Pepper Saxifrage	1
<i>Silene flos-cuculi</i> - (<i>Lychnis flos-cuculi</i>)	Ragged Robin	0.5
<i>Succisa pratensis</i>	Devil's-bit Scabious	0.1
<i>Taraxacum officinale</i>	Dandelion	0.5
<i>Thalictrum flavum</i>	Common Meadow-rue	0.1
Total		20

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

- 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), and for the basin floors Emorsgate EP1 pond edge mix is suitable as it contains species for seasonally wet areas.

Tables D and E give information about the species composition and percentages for grass and flower species for the EP1 plant mix.

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

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

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

Latin name	Common name	Percentage of mix
<i>Angelica sylvestris</i>	Wild Angelica	0.2
<i>Centaurea nigra</i>	Common Knapweed	0.5
<i>Filipendula ulmaria</i>	Meadowsweet	2
<i>Geum urbanum</i>	Wood Avens	0.1
<i>Heracleum sphondylium</i>	Hogweed	0.5
<i>Iris pseudacorus</i>	Yellow Iris	0.1
<i>Leucanthemum vulgare</i>	Oxeye Daisy - (Moon Daisy)	2.4
<i>Lycopus europaeus</i>	Gypsywort	0.1
<i>Lysimachia vulgaris</i>	Yellow Loosestrife	0.1
<i>Lythrum salicaria</i>	Purple Loosestrife	0.2
<i>Plantago lanceolata</i>	Ribwort Plantain	2.5
<i>Prunella vulgaris</i>	Selfheal	3.5
<i>Pulicaria dysenterica</i>	Common Fleabane	0.1
<i>Ranunculus acris</i>	Meadow Buttercup	3.5
<i>Rumex acetosa</i>	Common Sorrel	0.1
<i>Silene dioica</i>	Red Campion	3.5
<i>Silene flos-cuculi</i> - (<i>Lychnis flos-cuculi</i>)	Ragged Robin	0.5
<i>Thalictrum flavum</i>	Common Meadow-rue	0.1
Total		20

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

- 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*)