

29th November 2018

Mr. S Till
Development Control Officer
North Yorkshire County Council
County Hall
Northallerton
North Yorkshire
DL7 8AD

Dear Sam,

**Planning Application – NY/2018/0237/A27 - Nosterfield Quarry
Langwith House Farm extension – Scheme of aftercare and review of
restoration**

I am writing to comment on several proposals relating to the Langwith extension, in addition to the 'nature conservation' after-use of the northern section adjoining Lingham Lake.

The Lower Ure Conservation Trust (LUCT) manages the western end of Nosterfield Quarry (Kiln and Flasks Lake), in addition to the old quarry to the south – now Nosterfield Local Nature Reserve. As a result, we have worked closely with Tarmac and associated companies, for over 20 years.

We have had valuable discussions with Tarmac in recent years about the potential for improved after-use of the wider quarried area and subsequently agreed to make alternative and complementary suggestions, which could enhance the current proposals for the economy (such as appropriate increased tourism), nature, people and communities. We also feel there is scope to take greater account of climate change; notably through improved resilience to extreme weather events, carbon storage, in addition to increasing biodiversity.

The potential for mineral sites to deliver considerable biodiversity is well recognised on a national level, further highlighted by Chris Packham's National BioBlitz event at Nosterfield this year, with a remarkable 1,111 species recorded in one day, placing Nosterfield 2nd out of 50 sites nationally. We feel this serves to highlight the further potential this area can offer, particularly in relation to its location within the setting of the Thornborough Henges.

Tarmac have indicated a willingness to work with us, to seek ways of enhancing the area covered by the application. We are keen to offer assistance in the interest of wider gains for this important landscape, in addition to propagating and supplying appropriate local provenance planting material from the Local Nature Partnership and Heritage Lottery Funded, volunteer-run, wetland plant nursery.

We have attached comments relating to several specific points within the application, in addition to a more focused set of proposals and amendments. We are keen to discuss these with Tarmac in more detail, to explore options for longer-term management (such as Conservation Covenants) and would appreciate the opportunity to enlarge on these and put forward suggestions to the company, NYCC and a wider partnership.

Yours sincerely

Simon Warwick MBE
Director

Comments relating to :

Planning Application NY/2018/0237/A27

Nosterfield Quarry - Langwith House Farm Extension

2.2.8 We would ask that the proposed areas for restoration be reviewed; emphasis being placed on concentrating on the creation of 'wetland' habitat (further reducing 'open water'), such as fen and reedbed. The use of soils, which might otherwise be used for agricultural land, to create priority wetland habitat will also be more appropriate within the setting of the Thornborough Henges.

2.2.9 Use of fertilisers so close to the proposed waterbodies and habitats appears contrary to the remaining restoration objectives. Indeed, fertilising grasslands may well result in an increased number of flocking birds, notably geese.

3.1.3

A - We are pleased to note the emphasis on 'recreating elements of the past for the benefit of the local landscape, biodiversity' and 'heritage appreciation'. We also strongly support **appropriate** public access, where this will not cause a significant detrimental impact on the remaining objectives. Consideration needs to be given to the fact that 'public access' includes intellectual access, such as viewing an area, its wildlife and setting – it does not necessarily involve physical access. Quiet, large landscape-scale, areas are essential for species such as crane, requiring a clear focus on how to achieve – the juxtaposition of Ladybridge and Langwith indicate the key need for emphasising that long-term landscape approach.

B – We support the objective to 'echo the former wetland areas present historically in providing additional wetland in the restoration, emphasising historical promontories by opening up vistas and creating the Flasks Lane land-bridge.'

C – Whilst we support the objective to 'minimise the extent of open water', we suggest that 'maximising the quantity of agricultural or land-based restoration' is in conflict with the former objective. A larger area of fen or swamp habitat could be created with the available soils, thereby reducing open water.

D – We are concerned that inappropriate tree planting would add little or nothing to the local character of the area or setting of the Thornborough Henges. Such planting could have a significant negative impact on some priority habitats and objectives. (see *Wet Woodland*)

E – The inappropriate use of available soils appears a primary factor in the visibility of, and amount of, open water.

F – Bird strike hazard requires particular attention, especially in light of the numbers of geese and gulls; however, this requires detailed consideration, in consultation with the RSPB, AHVLA and MOD.

G - We support the desire to 'provide enhanced habitat for target species'. Please see 'Habitats and Species' below.

3.2.1 Please see other notes.

3.3 Land-use Schedule

As indicated, we consider this balance needs review, particularly the desire to increase wetland habitat 'reed fringed/marginal' habitat.

3.4 Land Restored to Agriculture

As indicated, we consider that the restoration of agricultural grassland conflicts with conservation, heritage, landscape and bird-strike objectives. The cutting of silage is clearly in conflict with local priority species such as Curlew.

We therefore consider restoration to 'agricultural grassland' should be minimised, or excluded, in the restoration objectives. Should it be necessary to restore a set amount to 'best and most versatile' land, consideration might be given to including this within the arable land and turning it over to suitable nectar or 'wild bird cover' crops – at least for the full term of the after-care period.

3.5 Hedge Planting

The planting of hedges between the arable land, wetland habitats and footpaths is generally positive. Consideration needs to be given to focusing on the use of an appropriate mix of local native provenance hedge plants.

Hedge Aftercare

Consideration should also be given to appropriate future management.

Allowing hedges to grow taller will assist with minimising views of open water. This might be done using traditional intermittent hedge laying, or cutting on a three to four-year rotation, as prescribed as good agricultural stewardship practice (i.e. cutting in January or early February).

Hedgerow Trees

Whilst the planting of hedgerow oaks is desirable in some instances, consideration needs to be given to the possible negative impact of planting hedgerow trees on conservation priority species. The Langwith and Ladybridge areas have long held a population of grey partridge *Perdix perdix* and the planting of hedgerow trees is recognised as having a negative impact on this species. This also potentially applied to some other local farmland birds, such as corn bunting *Emberiza calandra*.

3.6 Wet Woodland

The value of native wet woodland is without question; however, trees naturally only represent a small part of the species composition of a true native 'wet woodland'. Therefore, the proposal as outlined in the document offers little hope of a truly valuable habitat and

every indication of a significant long-term management liability. We consider this requires significant review.

As indicated below, a true natural wet woodland is often the result of a succession from other wetland habitats, such as fen and reedbed. We consider that it would be highly preferable to concentrate on the creation of priority wetland habitats, such as species-rich fen and manage these as long as it is considered sustainable, desirable and practical. In doing so, a far more desirable 'wet woodland' would be created through natural succession.

In certain areas it may be considered desirable to introduce local native provenance wet woodland (and shrub) species, where they are appropriate (i.e. near to Fox Covert). These might also include species such as the native aspen *Populus tremula* (as opposed to the similar non-natives planted at the western end of the quarry).

3.7 Reed Fringe/Marginal Vegetation

We consider that areas of such priority conservation habitat should be the primary restoration objective. Additional notes will be found under *Habitats and Species*.

3.8 Progress Records Review

As indicated in the document, *Crassula* poses a significant threat. Suitable planting, probably following appropriate herbicide treatment may well help in keeping this invasive species under control.

Other Alien Species

It is noted that there is a large stand of Indian balsam *Impatiens glandulifera* present adjoining the Ings Goit near Well village, to the west of the quarry. Every effort is necessary to ensure that this highly invasive species does not become established anywhere within the quarry or conservation areas. This will necessitate working with the landowners and Swale Ure Drainage Board.

Consideration should also be given to controlling American mink *Neovision vision* during the working, restoration and aftercare periods.

3.9 Longer Term Aftercare Management

Serious consideration needs to be given to the medium and long-term management of these areas. Particularly in light of the historical landscape, biodiversity value, public enjoyment and water quality/resources.

Flasks Lane Land-bridge

The formation of the 'Flasks Lane land-bridge' offers a unique opportunity to create a new footpath from Nosterfield village, down Flasks Lane, to the road adjoining Langwith House. From here a public footpath network links to villages such as Snape, Carthorpe and Kirklington (via the minor road), albeit less treacherous. This would go some way to echoing the route enjoyed by Lady Avice Marmion in 1257:

'Lady Avice is to have a road for driving carts and ploughs between her manors of Tanfield and Carthorpe, through the swamp on the south side of the head of the wood of Langwith'

We consider this to be a far more desirable option than an earlier proposal to form a footpath along the northern boundary of the Langwith restoration area. This seems to serve little purpose, will potentially undermine conservation efforts through disturbance and add to the existing significant footpath maintenance liability.

The creation of such a footpath (possibly a bridleway) seems fitting in the historical landscape setting, particularly when combined with associated species-rich 'swamp'.

It also needs to be acknowledged that this landscape has a long history of naturally challenging access; enhancing the case for keeping physical access to the core areas to a minimum – the open water bodies and swamp associated with the Flasks would *'have therefore formed a wide and sometimes impregnable barrier to the builders and users of the monument (henges, cursus, etc.) complex, most likely only traversed with difficulty and perhaps only by those with intimate knowledge of this landscape.'* (Harding, 2013)

Minimising disturbance to the core wetland areas is key, if iconic species such as crane *Grus grus* (see **Species** below) are to thrive and breed in this landscape.

Water Level Control

We suggest that there is a need for a landscape-scale review of hydrogeology and water management, affecting the immediate area and its impact on the wider landscape. This should be through a wide partnership, to share best practice and a more strategic approach. This could involve English Heritage, Environment Agency, Lower Ure Conservation Trust, North Yorkshire County Council, RSPB, Swale Ure Drainage Board, Tarmac, specialists, landowners and universities.

Groundwater monitoring indicates a strong natural water fluctuation of some metres, significantly impacted by water entering from the magnesian limestone aquifer. This is natural and will have been evident throughout the post-glacial period.

This natural fluctuation is very clear on Nosterfield Nature Reserve, some years it is in excess of three metres and would most certainly have been equally, if not significantly more, evident during the Mesolithic and Neolithic periods. It seems likely that high water levels would be a limiting factor for tree growth; therefore, with high levels, it would have been a large lake surrounded by trees. However, as the water levels dropped (typically 50-100 mm a week at Nosterfield NR), this would have opened out an extensive wetland habitat, dominated by swamp and sedge species. Such an area would have attracted large grazing animals (i.e. deer, elk *Alces alces*, aurochs *Bos primigenius*, etc.) and in doing so attracted early humans to hunt them, in addition to catching fish.

Such a rich wetland to the north, and the River Ure to the south, must have played a key role in our Neolithic ancestors choosing the location for the Thornborough Henges. Therefore, particular care needs to be given to ensure that water level management is appropriate to the heritage and conservation value of this landscape; in addition to recognising contemporary and community needs.

HABITATS AND SPECIES

Habitat Priorities

Woodland is not a priority habitat in the Swale and Ure Washlands, with woodland plants representing <2% of regional species extinctions; as opposed to 24% fen and mire and 10% aquatic plant species. Hammond (2007) concluded that '*at least 91% of historic wetland habitat has been lost from the Swale and Ure Washlands since the mid 18th Century and around 77% since the first OS maps were compiled*'.

Given these facts and the relative scarcity of woodland (quarry plantings excluded) within the Thornborough Henges landscape, it appears far more appropriate to concentrate on the creation of more extensive priority wetland habitats.

Wet Woodland and Wetland Habitat

As indicated above, a valuable wet woodland is often the result of primary colonisation of swampy vegetation, such as *W5 Alnus glutinosa-Carex paniculata*, or *W3 Salix pentandra-Carex rostrata* woodlands. Such woodland often supports a rich associated ground flora of swamp species.

It is therefore more appropriate to establish priority wetland habitat which, when and where considered desirable, could be allowed to move through natural succession to wet woodland. This would be most likely to occur where it adjoins existing wet woodland, such as Fox Covert.

Reed Fringe and Marginal Vegetation

There is clear paleo-environmental evidence for a species-rich wetland habitat at Nosterfield. A rich mosaic of extensive wetland habitat, including abundant sedge species, reed, bulrush and other marginal plants; in addition to wet woodland and open water.

Focus should be placed on seeking to (re)create fen and mire habitats, with an emphasis on:

S24 *Phragmites australis* - *Thysetium palustre* tall herb fen.

Hammond (2017) notes that this habitat is typically '*associated with floodplain fens and open-water transitions where water is base-rich but relatively poor, especially in habitats which are shallow-flooded in winter but surface-dry in summer. Nowadays it is largely restricted to East Anglian Broadland (Rodwell, 1995) but scattered examples occur elsewhere in eastern England.*'

In the past, such habitat was typical of the wetland lost through drainage and nitrification in the region; however, initial trials in planting on silt areas on the western end of Nosterfield Quarry look very promising. The case for promoting establishment of this habitat is further enhanced by it being the preferred nesting habitat for common (Eurasian) crane *Grus grus* in Europe (see below).

Other potential target habitats might include:

M13 *Schoenus nigricans* – *Juncus subnodulosus* mire (priority where possible)

M22 *Juncus subnodulosus* - *Cirsium palustre* fen-meadow (where appropriate)

S1 *Carex elata* swamp

S4 *Phragmites australis* swamp and reed-beds (lower priority than some other fen habitats)

- S8 *Schoenoplectus lacustris* swamp (patches in deeper water)
- S9 *Carex rostrata* swamp (where appropriate)
- S11 *Carex vesicaria* swamp (where appropriate)
- S13 *Typha angustifolia* swamp (paleo-environmental evidence)
- S20 *Schoenoplectus tabernaemontani* swamp (where appropriate)
- S25 *Phragmites australis* – *Eupatorium cannabinum* tall-herb fen (priority, where appropriate)

The establishment of such habitats, particularly over base-rich soils, will do much to increase carbon storage, in addition to enhancing the landscape for species migration.

Species Targets

Particularly considering its heritage importance, we suggest that the wider wetland landscape should aim to reflect the earlier species-rich landscape, whilst taking account of climate change, community and economic factors.

If one species reflects the earlier Mesolithic and Neolithic wetlands, in addition to capturing the essence of the earlier '*wide and sometimes impregnable*' (Harding, 2013) wetland landscape, it must be the crane; a species which has recently naturally made a return to the UK after an absence, as a breeding bird, of 400 years.

Cranes favour fen habitat of the types proposed (see above). However, they are susceptible to disturbance and favour locations some distance from regular human activity – ideally in excess of 500m. Therefore, if this species is to become a focus, large undisturbed areas, with suitable breeding and feeding habitat, are required.

Habitat focus on a wetland containing target habitats and breeding crane are likely to also favour a range of other target species, such as bittern *Botaurus stellaris*, marsh harrier *Circus aeruginosus*, water rail *Rallus aquaticus* and potentially bearded tit *Panurus biarmicus*. However (re)colonisation by species such as great white egret *Ardea alba* has already resulted in several recent records at Nosterfield and hints at potential breeders for the future; which might also include species such as spotted crane *Porzana porzana*.

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