

FORCE Response to Heathrow Airport Expansion Consultation

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FORCE response to Heathrow Expansion

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1.0 Introduction

This response to the Heathrow Airport consultation has been produced by Friends of the River Crane Environment (FORCE). FORCE has been engaged and concerned about the existing activities and future plans at Heathrow Airport for many years, due to its location within the boundaries of the River Crane catchment, the existing impact of the airport on the river corridor and its major surface water outfall into the river.

Our response is structured as follows:

- An introduction to FORCE, the Crane Valley and its relationship with Heathrow
- An overview of our response
- Consideration of specific impacts (direct and indirect) and mitigation opportunities
- Development of our response – including requirements and opportunities

This response develops upon the views submitted to Heathrow during the north-west runway proposals in 2014 and to the Department for Transport in the two NPS consultations in 2017. FORCE has also engaged with Heathrow staff and their consultants over many years and anticipates that this will continue as plans and proposals evolve.

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2.0 FORCE, the Crane Valley and Heathrow

Friends of the River Crane Environment (FORCE) is a community and environmental charity, formed in 2003 and with over 500 members. FORCE has a remit to protect and improve the community and environmental value of the River Crane catchment in west London. Further information on the charity can be found at www.force.org.uk

The River Crane catchment covers an area of 127 sq kms and includes the River Crane itself as well as the Longford River, Upper and Lower Duke's Rivers (all three being artificial channels created in the 16th and 17th centuries) and the Portlane Brook. Virtually all of the existing Heathrow site lies within the Crane catchment.

Heathrow Airport Holdings Limited (HAHL) has been an active member (alongside FORCE) of the Crane Valley Partnership (CVP) since it was set up in 2005. CVP also includes all five London boroughs within the catchment (Harrow, Hillingdon, Ealing, Hounslow and Richmond) as well as the Environment Agency, Thames Water, GLA and other key interested parties. More information on the partnership can be seen at www.cranevalley.org.uk

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3.0 An Overview of the FORCE Response

This section presents an overview of our concerns with the Heathrow third runway proposals and our proposed response to them.

1. There are major direct and indirect impacts on the Crane Valley catchment of both the existing airport operation and of the proposed third runway scheme
2. Whilst some of the direct impacts are addressed in the consultation document many of the indirect impacts are not. These indirect impacts follow from infrastructure growth – transport, industry, housing, hotels etc – and their associated noise and pollution. This mix of direct and indirect impacts risks gravely reducing the amount, quality and permeability of public open space in the surrounding area
3. In our view Heathrow cannot claim the benefits of associated growth (employment and economy etc) as an asset to the scheme and not explicitly consider the implications of this growth on the surrounding green infrastructure
4. There may be means of directly mitigating some of the direct impacts, but there will inevitably be considerable residual overall negative impact (direct and especially indirect), as the proposals are currently set out. For this reason FORCE are objecting to the proposals as they currently stand
5. The area impacted by existing operations and the new proposal (direct and indirect) includes the whole of the Crane catchment and also extends to the Colne and Brent catchments (to the west and east), in a broad band across west London and the Home Counties, between the Thames and the Chilterns. The highly populated areas impacted by the airport have been identified by Heathrow in their selection of locations for public consultation meetings about the development proposals (see our Figure 1)
6. The impact of the airport is on a landscape scale and any solutions also need to be on this scale. The area of impact is illustrated in Figure 1, which shows the key river corridors alongside the locations for the 40 + public consultation meetings held by Heathrow over the last two months
7. One fundamental (and potentially existential) impact of the scheme on the surrounding ecosystem would be the imposition of a major restriction to continuity across the Colne corridor, which also affects the Upper DNR and Longford Rivers in the Crane catchment. The new runway and associated infrastructure would effectively impose a wide blockage across the valley, restricting the main wildlife and community link along the Colne valley, also a major ecological link between the Chilterns and the Thames.

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8. There is a hugely important network of linking green corridors between the Thames valley and the Chilterns – including the Crane, Longford, upper and lower Duke’s Rivers and Brent River as well as the Colne system (as illustrated on Figure 1).
9. This network comprises thousands of hectares and hundreds of kms of linear green spaces, also linking with larger and iconic open spaces such as Hounslow Heath, Cranford Park, Syon Park and Ickenham Marshes in the Crane Valley; Bushy Park, Hanworth Park and Hampton Court along the Longford; The Welsh Harp Reservoir, Harrow Weald and Osterley Park on the Brent; Kew Gardens, Richmond Park, Runnymede and Windsor Great Park on the Thames; as well as the extensive open spaces along the length of the Colne valley.

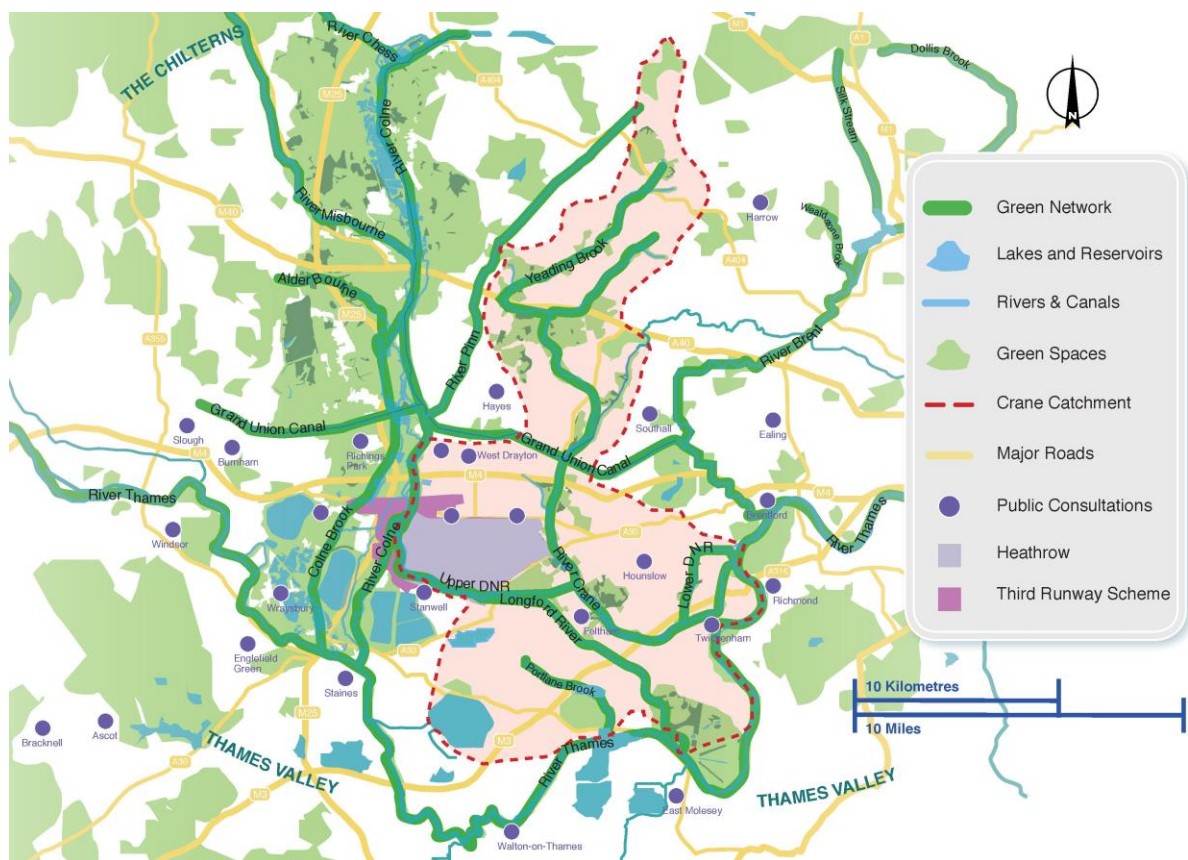


Figure 1: The Green Corridor Network and Heathrow: Thames to Chilterns

10. These corridors have benefitted from considerable investment over the last twenty years, as the value and appreciation of green wildlife corridors and associated open spaces in urban/suburban areas around West London has grown. This has been done through initiatives such as catchment partnerships, HLF grants and the GLA’s All London Green Grid for example. Nevertheless there is still considerable work to be done if the values and permeability of these corridors are to be fully realised as wildlife and community assets

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11. The proposals in the third runway plan to date – of a green ring around Heathrow – are an encouraging start. However, the plan does not consider the full area of Heathrow’s impact – as defined by Heathrow’s own consultation area – regarding noise, air quality and the loss and constriction of green spaces and open corridors by direct and secondary development
12. There is the potential to make a much more fundamental beneficial change to the wildlife and open space value of the Heathrow area of impact (or envelope) by major and long term investment to optimise the value of this network of green corridors
13. This could potentially deliver major enhanced links between the Thames and the Chilterns, providing real benefits to open space access at a local and regional level for all the communities impacted by Heathrow. If at sufficient scale it may also provide mitigation for the major impact of the runway as a blockage across the Colne valley. If managed well over the medium to long term, it may also mitigate the impact of the forecast secondary development within the Heathrow envelope linked to Heathrow’s growth, as well as help to counterbalance the impact of noise and air quality
14. A well planned and delivered network could also provide a major new green transport system (walking and cycling), both for the airport itself and linking each of the key population nodes in the Heathrow envelope with iconic open spaces and along green access corridors
15. The delivery of this vision would require early landscape scale planning across the Heathrow envelope, backed up by considerable and long term investment – both to secure the potential benefits and resist the push for ad hoc building on open spaces in the wake of any Heathrow expansion. Our belief is that this will be the last and best opportunity for such a scheme to be realised before a wave of development submerged this opportunity forever
16. Such an improvement scheme does not need the third runway in order to proceed. There has been considerable progress across all four catchment partnerships already, and projects like the London National Park City feed into it. However, the third runway proposals change the dynamics considerably. As it stands the third runway proposal presents a major threat to this long term ambition – however, if the project were to work in concert with this ambition, it could help to make it a reality for mutual benefit

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4.0 The Heathrow Proposals: Review of the Principles

4.1 Introduction

This section considers the key principles behind the proposals, whilst Section 5 (direct impacts) and Section 6 (indirect impacts) consider the specific impacts of the scheme. In each case our focus is led by the Objects of FORCE – to protect and enhance the community and environmental value of the Crane catchment corridors. However, the geographic scope of the impacts of the scheme extends well beyond the Crane catchment. We have therefore also considered these wider geographical impacts so as to; (a) be able to consider an appropriate level of mitigation for the overall scheme; and (b) provide support and solidarity with the issues and concerns of other catchment partnerships, in particular with the Colne.

We have looked to identify the potential impacts of the scheme according to key parameters and – where possible – have reviewed and commented upon the mitigations proposed and suggested further mitigation works. We have focussed specifically upon the proposals in the main consultation document; “Airport Expansion Consultation Document” and the main environmental proposals; as set out in “Our Design Approach to the Natural Environment”, both produced in January 2018. We have also made reference to our practical experience with Heathrow Airport through the Crane Valley Partnership, the Twin Rivers Group (considering the Upper Duke’s and Longford Rivers) and other interactions over the last ten years.

These evaluations are not considered as definitive and will be subject to review and development as we become better acquainted with the scheme and further information becomes available.

One of the principles of any impact assessment is the nature of the baseline condition. The baseline for engine noise and air quality related to air transport for example is forecast to reduce over time as new technologies secure improvements. In our view therefore the scheme needs to be evaluated against this reducing baseline condition, which we refer to as the “Two Runway” baseline condition. If it is not then (a) the local communities are not deriving any benefit from these technological improvements – which would all then potentially be accrued to the airport in the form of additional flights - and (b) the risk of no substantial technological benefits being derived is discounted from the evaluation - this risk being left for local communities to bear alone.

Finally, we would note that the scale of this proposal is breath-taking in many ways. It is clear that there is a major imperative to see the project happen, and that major investments (with huge engineering, design and planning challenges) over a long time period are envisaged for it to work. In this context we are disappointed that there is so little in the way of firm proposals for the delivery of green infrastructure benefits. However, we remain confident that, given the will from the management team, a much more ambitious approach to green infrastructure protection and improvement could still be incorporated into the project.

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4.2 Overview of the Main Consultation Document

FORCE welcomes many of the broad statements in the main consultation document. We do however have provisos to add to some of the key statements in the document, as follows:

- *“It is about legacy – building the infrastructure today that our children will need for tomorrow”*. We believe this statement is at least as true for the green infrastructure of the urban and suburban environments around the airport as it is for the airport itself
- *“We want our local communities to share in the benefits of Heathrow’s growth.”* The scheme at present considers economic benefits (such as jobs) as the primary consideration. Our proposal, to invest substantially in the green corridors linking every community impacted by Heathrow, would be a clear and tangible benefit for the wider population, regardless of their relationship with the airport itself
- *“We want to minimise the negative effects that expansion could have both during and after construction. That’s why we have already made a number of commitments on issues including noise, air quality and property and community compensation.”* We would like to see commitments of comparable weight given to outdoor spaces and the wider environment
- *“Our ambition is to build a long-term, sustainable legacy for our local community”*. Urban communities can only be sustainable if the quality of their green environment is protected and enhanced to counterbalance the impacts of growth. This is not as yet a key feature of the proposal
- *“We have a responsibility to those around us to **reduce** (our emphasis) the potential negative effects of expansion during and after construction. In this consultation you will see our emerging plans to ensure expansion is fair to local residents and ensure that Heathrow becomes greener, cleaner and quieter”*. In our view Heathrow needs to provide compensatory improvements to fully counterbalance the negative effects – not just the means to reduce them. Furthermore, the target to become cleaner, greener and quieter needs to be over and above any forecast improvements to engine noise and pollution (for the reasons provided in 4.1 above)
- *“We will spend over £1bn on community compensation (noise and property)”*. No doubt this will be welcomed, but it will only benefit those living in close proximity to the airport, and will have no benefit to either the wider community nor to any of the open spaces impacted by noise and air pollution. In our view the impact upon outdoor (and particularly public green open) spaces needs to be considered as well as indoor spaces. This consideration is required not least due to their considerable value as places for quiet relaxation, delivering associated physical and mental well-being – and improving the overall quality of life – for the wider community within the Heathrow envelope

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- *“Mode share – we will incentivise and support a shift in transport modes for those working at and travelling through the airport”.* In our view it is not sufficient to promote a shift from private transport to public transport – which still has an impact upon local noise and air quality – as well as having major additional open space development implications. Heathrow Airport at present is **unfriendly and unsafe** for anyone wishing to access by walking or cycling. The project needs to address this fundamental failing.

The project also, if it wishes to promote a fundamental shift in green transport use (with knock on benefits to noise, air and overall quality of life within the wider Heathrow envelope) needs to look at the wider movement of people across the Heathrow envelope. It needs to actively promote the development of walking and cycling routes that will provide safe and attractive routes into the airport itself - as well as better alternative green transport links between each of the population nodes within this envelope

These issues are addressed further in the review of individual impacts and mitigations in Sections 5 and 6.

4.3 Overview of the Design Approach to the Natural Environment

FORCE welcomes many of the broad statements in the “Design Approach to the Natural Environment”. We do however have provisos to add to some of the key statements in the document, as follows:

- *“Our vision is to create a positive legacy of better, well connected green infrastructure, which uses land efficiently to achieve multiple environmental, social and economic benefits.”* FORCE supports such a vision. However, we believe this vision needs to encompass the entire area impacted by activities at the airport, as defined by the extent of the consultation events. The geographic extent of Heathrow’s vision is not yet defined to our knowledge; however this document makes frequent reference to the Colne valley (as a key area impacted) but makes no significant reference to the wider area of impact. This is a major concern to FORCE and we believe that the wider area of influence and interest with respect to green infrastructure, encompassing the area between the Thames and the Chilterns, needs to be agreed and worked to.
- *“The Heathrow Expansion Project...presents an unprecedented opportunity to deliver high quality mitigation for green infrastructure in the local area...”* FORCE gives this statement a guarded welcome. In part because it is not clear whether “local” in this context means “local to the area of impact” (which we support) or merely “local to the area of the airport” (which we would not). Furthermore, we consider that the green infrastructure of the area has considerable potential for major improvement and not simply for mitigation.

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- FORCE welcomes the recognition of “*the chance to address areas of poor quality natural environment.*” Many of the green spaces around Heathrow – and some in the wider area of impact - are currently far from optimal value for either wildlife or local communities. FORCE would welcome investment and management plans to improve the quality of those spaces for local residents and airport users (employees and passengers) availing themselves of the green infrastructure to access the airport. FORCE supports the ambition to deliver “*an enhanced network of green infrastructure*”. However, we believe these statements require more specificity and commitment, particularly given the way in which other plans and proposals are emerging, which would use and/or compromise many of the green infrastructure assets in the local and wider area. Many of these proposals are either directly or indirectly linked to the proposed airport development.
- FORCE supports the emphasis on connected green infrastructure. We would emphasise that improving this connectivity will require the removal of a number of significant severance obstacles within the existing network. Within the local Crane corridor these include physical barriers such as crossings of the A30, A4, A315 and A312 (at the Causeway) – which are currently either physically dangerous or virtually impossible without a significant detour with limited or no local crossing points. There is also a lack of signage and adequate all weather pathways for walking and cycling in many places. Interestingly, where improvements have been delivered (through the CVP in partnership with FORCE and others), the beneficial impact on user numbers has been by an order of magnitude or more. Delivering a connected green infrastructure will also require formally protecting these corridors as “green infrastructure assets” against future severance caused by other infrastructure requirements
- FORCE also supports the emphasis on efficient land use, and we further propose consideration of active measures, such as the rationalisation of warehousing facilities, the use of shared driveways and multi-storey car parking, to reduce the overall land take of grey infrastructure and create enlarged and enhanced areas of natural green space
- FORCE expects Heathrow to comply fully with the revised draft ANPS advice; “*that where networks of green infrastructure have been identified in development plans, they should normally be protected from development and, where possible, strengthened by or integrated within it.*” Although several of the green spaces around Heathrow are currently of low environmental or amenity value, their green infrastructure potential is enormous. FORCE believes that these should be protected and strengthened in line with the revised ANPS, rather than considered for development
- FORCE supports the ambition “*to improve wildlife habitats,*” but again would welcome more specificity and commitment from Heathrow
- The consultation document acknowledges the importance of the Colne valley and its position within the All London Green Grid. FORCE would emphasise that the Crane Valley is also part of the ALGG – and shares Area 10 of the ALGG with the Colne catchment. FORCE would

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expect parity of treatment for the Crane Valley within this process and this does not as yet seem to be given

- FORCE supports the “*hope to deliver an overall gain in biodiversity.*” However, FORCE believes that this should be an investment objective rather than merely a hope, and we would further state that Heathrow should be held accountable for the achievement of this objective, as measured over the long term
- We note the concern regarding “*visual effects on sensitive receptors, such as local residents*”. We would note that the open green spaces in the surrounding area should also be considered as sensitive receptors, given their value derives in part from the views and sense of well-being that is provided by them.
- Under “*Proposed approach to green infrastructure*” the document states that Heathrow; “*are in the process of identifying areas that could contribute to a high quality well-connected and multi-functional green infrastructure network.*” FORCE welcomes this. However, we are concerned that, at present, this approach is too piecemeal in character. FORCE believes that the airport, expanded or not, needs to be considered within the context of the entire ecosystem between the Chilterns and the Thames

These issues are addressed further in the review of individual impacts and mitigations in Sections 5 and 6.

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5.0 Direct Impacts of Airport Development and their Mitigation

5.1 Noise

Noise is one of the key concerns for local residents within the envelope of Heathrow impact. We understand that at present much of the area beneath the flightpath is in contravention of EU/WHO noise limits. The focus in the proposals is on the impact of noise upon residents within their homes or other buildings (schools, work places etc) and considerable investment is proposed to mitigate this. However, the impact upon the open spaces within this envelope is even more acute and, short of wearing ear defenders, very difficult to do anything about.

Tranquillity is one of the key values of green open spaces in urban areas – a place to escape from urban noise and to recharge in communion with nature. The existing activities at the airport compromise the tranquillity of significant parts of the open spaces and river corridors of the River Crane catchment on a regular basis.

Adding a third runway will inevitably increase the size and/or intensity of the noise impacted envelope around the airport and within the local green spaces, when compared to the two runway baseline condition. The impacts will be as a result of more overflying and of associated increase in transport, construction and associated infrastructure noise.

Ironically, the proposed reduction in night flights and the period of overflying, whilst undoubtedly welcomed by home owners, would further adversely affect the tranquillity of local green spaces at the times when most people will be using them, when compared to the current two runway baseline condition.

Public open spaces, particularly where heavily vegetated, can provide some absorption benefits with respect to noise impacts to the surrounding area – and this provides a further benefit of protecting, and providing additional and improved green open spaces, within the Heathrow envelope.

The first thing to be done about the noise impact on green and open spaces is for the scheme to acknowledge it – and then to map its extent and impact across the key green open spaces and networks of the surrounding area. There may then be means identified for mitigating the impact, and for designating particular open spaces as tranquil areas – either entirely or for designated periods of time – thereby acknowledging the issue and seeking to provide protection of, and public information about, any remnant tranquil open spaces.

In summary, this is a major impact on local open spaces within the Heathrow envelope for which there is no mitigation proposed – and for which direct mitigation may not in effect be available. This deficit also needs to be acknowledged and alternative forms of mitigation provided.

5.2 Air Quality

This parameter is rather similar to noise in respect of its widespread impact on public open spaces and the relatively limited means available to mitigate against it. The existing air quality, under the Two Runway condition, is already in breach of EU Regulations. Air quality also largely mirrors noise in terms of the impact increasing under a three runway compared to a two runway condition

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– both due to increased flights and associated traffic and construction impacts. The envelope will also increase, albeit the impact may be different from noise with distance from the runways.

Green infrastructure also has a capacity to absorb poor air quality, maybe to a more significant extent than is the case with noise – with this capacity again being a function of the vegetation cover. This is an additional benefit and value of new green infrastructure to be considered.

One thing we do not know is the actual and potential future impact of poor air quality upon the value and diversity of the open spaces within the Heathrow envelope. Poor air quality is well known to severely reduce the health and species variety of lichens in an area for example – though its impact upon the wider natural environment is not known to us at present. This is an issue that we would expect the consultants to address as part of the overall project.

A further consideration is the impact of air quality on those people using these open spaces for their enjoyment and exercise. This too needs to be considered by the project – and if the impacts are significant then appropriate responses provided.

As with noise, the bottom line may be that there is no effective and complete direct mitigation available for the impacts upon air quality. This net deficit also needs to be acknowledged and alternative forms of mitigation provided.

5.3 Runway Overprinting of the River Corridors along the Colne Valley

The new runway would imprint across a large part of the Colne Valley. It would also result in several rivers being put into a large tunnel beneath the runway, over a length of around 500 metres. Under each option being considered this will be the fate of the Longford River and Upper Duke of Northumberland's River. It is proposed that these two rivers are put into a single channel through this section. In addition, it can be anticipated that there would be further impacts and compromises proposed with respect to associated infrastructure alongside the runway.

The wider implications for the Colne valley of this proposal are outside the scope of our submission – and we hope and expect these to be dealt with in detail by Colne Valley representations. Sufficient to say that we are in regular contact with the Colne Valley Partnership, and a number of their constituent bodies, and FORCE are supportive of their concerns. We are also concerned for the impacts upon the integrity of this adjacent river corridor and how this might impact upon the permeability of the route linking the Thames and the Chilterns, for both wildlife and people, and the overall value of the river network in the region.

Our direct concerns lie with the integrity of the Longford River and Upper Duke's River, both of which lie within the Crane catchment, and both of which are of great importance to the downstream habitats of the catchment and as heritage assets to the region.

The Upper Duke's River was constructed in the 16th Century and has operated ever since as a major input of water into the middle and lower Crane. This input provides a major beneficial water resource to the Crane as well as on balance being a considerable water quality asset to the river. Our "Citizen Crane" project, monitoring water quality and ecological value each month at 11 locations over the last four years, has concluded that the input from the Duke's River has a significant beneficial impact on the downstream ecosystem.

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The Upper Duke's River is a significant environmental, heritage and community asset in its own right. It supports a healthy fish population as well as kingfishers and water voles in the lower reaches. We also believe it is a significant wildlife conduit linking the Colne with the Crane and providing a route into the Crane for fish, invertebrates and other wildlife. This conduit has proven of particular value for replenishing the River Crane following major pollution events in 2011 and 2013.

The value of the Longford River to the habitats downstream is not as well known to FORCE – and we hope this issue is being addressed by Royal parks as the owners of the channel and the key SSSI habitats downstream in Bushy Park, Home Park and Hampton Court. Given the high wildlife, landscape and heritage value of these landscapes, as well as the importance of the Longford to the green corridor through Feltham, we anticipate the importance is at least as great along the Longford.

FORCE appreciates that considerable design effort is going into the optimisation of the proposed channel beneath the proposed third runway to protect wildlife access. Nevertheless we remain concerned that the scheme will result in the reduction in wildlife permeability along the combined river corridor as a result of:

- The creation of a dark corridor beneath the runway itself and its impact upon mammal, fish and invertebrate movement
- The security and other measures required to close off the ends of this dark corridor- and their impact upon wildlife migration
- The long term maintenance of any wildlife habitats that are created in this area – given security concerns and the lack of public access and oversight
- The impact of the associated new grey infrastructure – along with associated noise, lights and air issues – particularly upon the use of the flight corridor for birds and bats
- The associated controls on bird numbers linked to bird strike and the impact of these measures – see also below

The scheme has yet to show how these negative impacts and risks will be properly mitigated.

FORCE is also concerned about the potential loss of high value heritage features along these two river channels, caused by the runway itself and/or associated infrastructure. We have not done any extensive surveys for structures, heritage or archaeological features– and would expect that to be done by the consultants, given the key heritage importance of the two historic (16th and 17th Century) water transfer features. As one example, we are aware of a fine and historic brick bridge across the Upper Duke's River near to Harmondsworth that could be at grave risk under the scheme.

5.4 Bringing the Longford and Upper Duke's Rivers together as a single channel

The scheme proposes to bring the Upper Duke's and Longford Rivers together as a single channel, flowing beneath the runway part of the site. At present the two channels run separately –and the Colne offtake for the Upper Duke's River is several kilometres further up the river than that for the Longford, resulting in a different hydraulic character, that is presumably necessary to convey the water effectively through to the River Crane. Bringing these two watercourses together risks

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changing this hydraulic character, influencing the flow velocities along the Upper Duke's, and the consequent energy and oxygen inputs along this channel. This risk needs to be appropriately evaluated and mitigated.

On the other hand the two channels, as they currently operate around the airport, are effectively netted trapezoidal concrete channels and sub-optimal in terms of their wildlife value. If the two channels were to be brought together then there is scope for continuing the route downstream as a single and much more natural two stage channel until the point, several kilometres further downstream, where the two channels are required to split. This option would have the considerable added value of freeing up a part of the corridor for a much improved public access route and enhanced marginal river habitat.

5.5 Flow Controls on the Longford and Upper Duke's River

As noted above the two rivers are valuable, not only in their own right, but as high quality inputs to the River Crane (a Site of Metropolitan Importance for Nature Conservation) and the Bushy Park complex (a Site of Special Scientific Interest). The flows into these two rivers from the Colne River system are not gauged or explicitly controlled at present – and our ad hoc gauging work through the Citizen Crane project has indicated that the flow along the upper Duke's river has been prone to significant variation over the last four years.

Given the scheme proposes to bring these two rivers together then it would be imperative to control the flows at the point when they are again split, such that the flows were of optimal benefit for the downstream receiving waters. A key pre-cursor to designing this will be to initiate gauging of the existing flows along both channels now - and thereby gain a much improved understanding of how the inputs work now and could be optimised in future for the benefit of all the river corridors and their downstream systems.

5.6 Site Drainage: Flow and Water Quality Implications for the River Crane and Portlane Brook

Around one third of the surface water run-off from the airport is discharged into the River Crane via the eastern Balancing Reservoirs. The Portlane Brook is a part of the Crane catchment (though not well known to FORCE) and is also believed to receive around a third of the outflow.

For the most part the outflow from Heathrow into the Crane is beneficial to the river – as an additional flow resource and with reasonably good water quality. However, for many years the River Crane at Donkey Wood and downstream has been severely impacted following cold weather periods by outflows rich in glycol de-iceant. We know, through Citizen Crane survey work over the last four years, this results in a very high BOD within the river, which in turn causes blooms of sewage fungus in the river downstream for several kilometres. This sewage fungus smothers the gravel bed and reduces the invertebrate life of the river. In the most severe cases it also smothers and kills in-stream river weed and impacts fish and other river life. FORCE does not know if there

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are other contaminants within the glycol that may have any additional detrimental effect on the river ecosystem.

2018 has been another problematic year for this phenomenon and the pollution has continued from January up until the present day – impacting the river ecosystem and causing concern and distress for local people using the river corridor. For example, FORCE has been recommending over the last few weeks that dog owners exercise caution and do not allow their dogs into the river.

To their credit Heathrow has been investing considerably to resolve this issue. Improvements to the operation of the eastern balancing reservoirs this year will be followed by a major new treatment system being commissioned, hopefully in time for next winter.

One further issue is the concern regarding low flows in the lower Crane following periods of lower than average rainfall. Particularly below where the river splits, at Kneller Gardens in Twickenham, this results in a sub-optimal ecosystem and the lower Crane below this point has dried completely in previous years. As a result FORCE and others (including the Environment Agency) have discussed with Heathrow Airport the potential for transferring more water into the Crane catchment during low flow periods.

Considering these issues in turn FORCE requests the project:

1. Ensures that the existing outflow into the river no longer has a detrimental impact upon the ecosystem
2. Considers carefully the glycol management system at a third runway site such that it is ensured not to impact upon any river system – and the outfall is licensed to account for this
3. Considers the pollution pathways for other contaminants – such as fuel and sewage for example – to minimise the risk to the river system and ensure all outfalls are licensed to account for this risk
4. Having taken the points above into account, actively explore how drainage from the existing airport and any new development can be managed and used to optimise the flow regime and water quality within the River Crane – as well as other river corridors

5.7 Construction Sites

The third runway project would be one of the largest and most complex construction projects in the UK. As well as the construction sites themselves, large temporary works sites would be required for the storage and movement of materials and for construction workers. There are several clear risks and impacts associated with the construction works:

1. Considerable risks of surface water pollution
2. Temporary works sites are often located on adjacent open spaces. These are almost inevitably to the short term (and often the longer term) detriment of the environmental and community value of the sites
3. There are proposals to create new gravel extraction sites in the local area linked to the Heathrow development

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It is to be expected that planning and design work would seek to minimise these risks and impacts – however some residual risk and impact is inevitable.

5.8 Translocation of Facilities from the Runway Footprint Area

The footprint of new development includes a considerable area of existing facilities and operation – including large areas of car parking, a waste management plant, The Immigration Removal Centre, oil storage facilities etc. The new sites required by these facilities would clearly have their own impacts – including upon the overall provision of open space and adjacent open space.

It is to be expected that planning and design work would seek to minimise these impacts – however some residual impact, particularly the loss of further open space, is inevitable.

5.9 Bird strike and Impact on Wildlife Potential

Management of the risk of bird strike results in controls being put on the habitats around an airport runway – by managing the habitat itself to be less bird friendly, the netting of open water areas and the use of scare tactics to deter birds. These approaches already impact upon the diversity and management of wildlife habitat within the river corridors around the airport (including within the Crane corridor).

We assume that, with the construction of a third runway, the areas in which bird strike management approaches are adopted would increase. These restrictions would be likely to have a negative impact upon the existing or potential wildlife management opportunities over a wider surrounding area. This issue has not been seen to be addressed within the documentation produced to date and we consider it needs to be properly evaluated during the ongoing assessment process.

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6.0 Indirect Impacts of the Development

The indirect impacts of the development proposals are much broader and more difficult to assess. They are likely to include:

- New transport links and the relocation of existing transport infrastructure
- Ancillary infrastructure – warehousing, support industries, office accommodation, car parking, hotels etc
- Secondary growth related to the additional airport activity – industrial, commercial, service and entertainment
- Housing and associated social infrastructure linked to new jobs – shops, schools and services etc

FORCE does not seek to quantify or properly evaluate the risks and impacts associated with secondary and indirect development at present – as these remain rather nebulous in terms of size and geography. However, we are very aware of the potential size of this issue and have identified key concerns in this section. To give one small example, LB Hounslow’s employment land review (2016) forecast an additional industrial floor space of 187000 sq metres and office floor space of 96000 sq metres as a result of the third airport proposals.

In some ways the indirect growth associated with the scheme is an even greater risk to the open space network than the direct impact of the runway scheme itself. This is because much of this growth could well be ad hoc and, without any over-arching plan to protect them, local open spaces may not be recognised or valued as part of this wider green space network, and will be particularly vulnerable.

FORCE is concerned that the scheme has not given much consideration to the impact of secondary development and indirect impacts at present. On the other hand the scheme is using the growth in the local economy as a key part of the argument in favour of the airport. The scheme states that it expects “to create 40,000 new jobs local to Heathrow” and “see thousands of new apprenticeships” – and these expectations are up front and central on page one of the consultation document. The loss and degradation of open spaces, in the broad area of the Heathrow envelope, is a key risk associated with this growth. Therefore, in our view, the development needs to assess and seek to mitigate against the negative impacts of this associated growth.

One early example of the secondary growth effect can be seen in the proposals in the Hounslow West of Area Plan – which was published for consultation in 2017. This plan includes proposals for large scale removal of Green Belt protections and the development of extensive areas of (supposedly protected) Green Belt and Metropolitan Open Land, including the development of over 100 hectares of protected Green Belt. In our view, the bullish pro-development stance of these proposals is at least in part due to the area’s proximity to the airport and its associated growth forecasts.

The southern rail access route is being evaluated at present and options include the use of the green corridors of the Longford River and Upper Duke’s River. A particular concern is the attraction of

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these green corridors for the provision of transport routes in the absence of clear and over-riding protections.

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7.0 Requirements and Opportunities

7.1 Introduction

This section sets out FORCE's key concerns regarding the proposals to date and outlines our proposed requirements for addressing these, as well as opportunities for beneficial outcomes for green spaces within the Heathrow envelope.

7.2 Scope of Impact

There are two aspects to the scope that FORCE would like to see reviewed and amended:

- **Geographic scope:** It is clear from the locations selected for Heathrow consultation events that the actual scope of the impact from Heathrow (at present and in future) extends across the area of west London and the Home Counties – west to east between Windsor and Ealing; and south to north between Walton and Harrow. The area considered to date in the proposals though is much narrower around the airport.

FORCE believes that the area considered by the project needs to extend considerably to embrace the whole of the Heathrow impact envelope. This would more adequately address the overall impacts of the scheme as well as providing a wider range of mitigation opportunities

- **Range of impacts:** the scheme would result in a wide range of secondary and indirect development impacts. The proposal is very keen to take the credit for the positive economic benefits of these secondary impacts. In our view therefore it is necessary and appropriate to consider the negative impacts and seek to mitigate these

These two points are made up front as they need to be addressed in the near future so that the scope of the planning and design stages of the scheme is properly defined.

7.3 Masterplan for Green and Blue Space

There is an urgent need for an overall Masterplan for the open spaces within the Heathrow envelope, covering the whole of the area covered by the consultation exercise. The reasons for this urgent need are as follows:

- The scheme impacts directly in a wide variety of ways on the Heathrow envelope area
- The scheme poses an existential threat the Colne valley and its value as a wildlife and community corridor between the Thames and the Chilterns
- There are major direct and secondary threats of development and change to the open spaces of the wider Heathrow envelope as a result of the scheme
- There is considerable scope for green transport opportunities for the scheme along the corridor network

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- At present, there is little or no regional scale planning and protections afforded to the green and blue corridors within the envelope. This is in part due to the lack of a single overarching authority with responsibility for these matters
- Those protections that are in place, such as Green belt and MOL status, are being actively challenged by parties interested in development and linked directly or indirectly to the Heathrow scheme
- An active approach to the protection and enhancement of these green corridors could be a significant benefit derived from the scheme – benefitting all the communities within the Heathrow envelope
- Failing to actively protect and enhance these corridors would inevitably result in the creeping development, blockage and degradation of these wildlife and community assets over the next twenty to thirty years. This would be a major (and potentially THE major) detrimental impact of the third runway scheme when viewed from the perspective of history
- This masterplan is required in the near future and in concert with other scheme plans so that the value of green infrastructure throughout the Heathrow envelope is mainstreamed into the wider plans for Heathrow and other interested parties

The scope of the plan needs to be developed in concert with the key interested parties – including the partnerships that have been operating over the last ten to fifteen years to protect and enhance these corridors and catchments – and which include all the main public and private landowners, regulatory authorities, third sector and community organisations, and other interested parties. The scope would include:

- Present value and potential future value of the open and green space infrastructure – from a wildlife and broad community perspective
- Direct and secondary development threats – existing and potential
- Alternative options for development – including the better use of existing developed space, optimising the space needs of all facilities and the co-location of facilities for example
- Opportunities for enhancing the green space network – by better protections; removal of obstacles to movement by wildlife and people; direct investment over the short, medium and long term; strengthening of the partnerships and other institutions necessary to deliver benefits
- Recommendations for investment and planning requirements to deliver an appropriate level of protection and improvement over the medium to long term

This plan would cover all the corridors identified in Figure 1, planning for an improved network of green space links for all the communities affected by the scheme and effectively linking the Thames to the Chilterns for wildlife and local people. It would build upon the work of the catchment partnerships, the aspirations of the GLA's All London Green Grid and the London National Park City.

7.4 Water Quality and Flow Controls

Heathrow has impacted upon the water quality in the Crane catchment over many years. This has been primarily due to the outflow of glycol rich water following winter de-icing at the airport.

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However, the major pollution event in 2013 – which wiped out all the aquatic life in the river for around 10 kilometres downstream of the A4 – whilst the direct responsibility of Thames Water, was caused by releasing raw sewage into the river as an alternative to flooding the airport.

It is a basic expectation of FORCE that there will be no negative impacts upon water quality in the river as a result of existing and new operations at Heathrow going forwards, and that the risks of pollution are effectively minimised through appropriate planning, design and operational controls. We have set out some more detailed views and expectations in section 5.6 above.

This is one area where there is scope for providing an improvement to the existing condition, through careful consideration of the drainage flows from the airport and designing these to benefit the River Crane – particularly during low flow periods.

7.5 Longford River and Upper Duke's River

Section 5.3 to 55 above set out a series of concerns and opportunities regarding these two river corridors. The corridors also provide key links within the wider network linking the Thames and Crane with the Colne. The value of these links is far from optimised at present and there are major opportunities to make improvements to the way they operate as wildlife and community green corridors.

One immediate opportunity is to review the operation of the twin rivers section and to re-design this as a single channel with a much enhanced wildlife and walking/cycling corridor around it. There are other opportunities for enhancement throughout these corridors.

7.6 Major Investment to the Wider Green Corridor Network

The scheme will have an inevitable negative impact upon the value and integrity of the surrounding green corridors when compared to the two runway option. These impacts are set out in this response and many are partly or fully resistant to direct mitigation. On the other hand there is also a “once only” opportunity to create a greatly enhanced network of functioning green corridors throughout the Heathrow Envelope as a result of this scheme. This would:

- Require major medium to long term investment in the green infrastructure of the Crane, Colne, Brent and Thames corridors
- Create a major new/enhanced green space network for West London – linking the Thames to the Chilterns - for all the communities impacted by the airport (several million) along with a green ring around Heathrow itself
- Transform the opportunities for green travel opportunities to and from the airport
- Recognise, protect and enhance a network of designated outdoor “quiet spaces” – designed and managed to provide tranquillity
- Provide green links to all the key urban centres impacted by the airport
- Provide links to cultural and heritage sites of value and importance

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This opportunity can be delivered through communities, working together with local contractors, to design and implement much of the work – with larger contractors for major scheme elements. This would build upon the experience of the catchment partnerships over the last ten years, where many £millions in total have been invested through this means. This approach helps to create a sustainable long term enhanced environment with widespread community engagement and buy in.

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8.0 Conclusion

In conclusion, FORCE is very concerned about the direct and indirect implications of this development. **FORCE objects to the proposals** as they are currently presented. FORCE recognises this development, and the further infrastructure that would lead from it, as an existential threat to the integrity and potential of the network of green infrastructure that lies within the Heathrow envelope.

There does however remain time for the scheme to engage actively with these concerns and thereby transform them into a major opportunity. This would require an appreciation of the wider geographic impacts of the scheme followed by a major commitment of time and resources to resolve them for the benefit of the airport itself and the wider community.

FORCE remains committed to the protection and enhancement the environmental and community value of the corridors and open spaces of the River Crane catchment. We are willing to work with all partners who share in these objectives and would welcome further opportunities to discuss our concerns and objectives with Heathrow and all other interested parties.