Biodiversity Impacts of Heathrow Expansion

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This briefing highlights why proposed Heathrow expansion would pose a major risk to biodiversity in the Colne catchment. It would cause permanent environmental harm on a scale that cannot be credibly dismissed as a localised or fully mitigable impact. The scheme would not simply consume land; it would break apart a functioning ecological network causing irrevocable deterioration of biodiversity and natural assets. The loss of Green Belt, wetland habitats, river corridors, and open landscape character would sever ecological connectivity links from the Thames through the Colne Valley Regional Park to the internationally rare chalk streams of the Chilterns National Landscape, undermining the very ecological coherence on which the area depends.

Core biodiversity risks

Expansion would lead to the loss of around 1,300 acres of Green Belt, plus additional loss from displaced businesses and infrastructure associated with a larger airport. That is not a marginal land-take; it is a structural loss of green space and habitat at significant scale. The Colne Valley contains intricately interconnecting rivers, chalk streams, wet meadows, floodplain habitats, lakes, and riparian corridors that provide vital life support to species such as kingfisher, water vole, otter, fish communities, and rare aquatic plants.

Construction and operation would critically increase risks of habitat severance, light pollution, noise, vibration, and hydrological and geomorphological changes, all of which can reduce the ability of existing natural dynamic river systems to self-regulate and protected species to survive and move through the landscapes they depend upon. Heathrow acknowledges the ecological importance of the area and its role as wildlife corridors, which underscores the sensitivity of the area to major physical change.

Rivers and habitat connectivity on a regional scale

Five rivers and multiple smaller streams many following naturally sinuous courses that sustain diverse habitats and ecosystems unchanged for 1000s years, are proposed to be diverted and put into tunnels or engineered corridors, These watercourses are not interchangeable engineering assets; they are living ecological corridors and our natural heritage whose loss or degradation would destroy habitat, natural hydro-morphological processes, weaken connectivity and resilience, by reducing species ability to move between both channels and local floodplain refugia, and most importantly disconnecting ancient migratory routes between the Thames and the internationally-rare chalk streams of the Chilterns National Landscape.

The proposed project would furthermore affect the wider 1,000 km2 Colne catchment and a network of rivers and watercourses that are central to the area's biodiversity value. Once these rivers are diverted, culverted, merged, or placed in tunnels, the physical damage to the landscape is not reversible, with resulting deteriorated habitats unable to match the natural capital, social and ecological value of the existing natural system.

Heathrow's proposal to rely on covered river corridors is especially weak. It remains an unproven concept, and the burden is on Heathrow to demonstrate, with robust evidence, that such structures can sustain the required light, moisture, flow, floodplain, and habitat conditions for aquatic and riparian species to survive over the long term. No such evidence has been produced to date.

Heathrow's own water and hydro-ecology assessment indicates the sensitivity of the site and the complexity of managing water environment effects. Even where individual impacts are described as "mitigated," the combined effect of land-take, river diversion, culverting, wetland infilling, and induced

development is more than likely to be unsustainable and inevitably amount to a long-term net biodiversity loss. Heathrow's earlier assessment work accepted that, without mitigation, the scheme would directly remove aquatic and riparian habitat within the site boundary and most likely cut connectivity for wildlife.

Why mitigation is not enough

This is a case where mitigation language risks obscuring an irreversible outcome of deterioration and net loss of biodiversity and natural processes required to sustain healthy ecosystems directly contradicting Heathrow's own biodiversity objectives. The permanent conversion of natural channels into engineered forms, the loss of wetlands and riverine habitat, and the pressure from construction, noise, vibration, and lighting are not minor effects that can be offset by generic habitat creation elsewhere. We remain deeply sceptical of any claim that biodiversity can be maintained while the ecological fabric of the site is dismantled. Replacing one habitat with a technically managed substitute is not the same as retaining a functioning river catchment, and there is no convincing basis for assuming ecological equivalence.

Planning and policy issues

The proposed expansion appears difficult to reconcile with modern policies that champion biodiversity objectives and the mitigation hierarchy, which requires avoidance of impacts first, then minimisation, restoration, and only then local compensation. The loss of natural river reaches, wetland habitat, and ecological continuity would be especially problematic where replacement habitats are unproven, fragmented, or dependent on long-term management that is not securely guaranteed. Within an ever shrinking natural landscape under enormous development pressure, local compensation opportunities are scant and would be unable to mitigate adequately for the scale of impact within the catchment context. There is also a significant policy question about whether the project would comply with regulatory requirements for water environment and biodiversity protections in practice, not just on paper. We share concerns raised by the Colne Valley Regional Park and Colne Catchment Action Network (ColneCAN) that pollution incidents, construction impacts, and Water Framework Directive and Biodiversity Net Gain issues may be under-scoped or treated as controllable without sufficient evidence.

Questions for Government

1. How does the Government justify supporting expansion in an area of recognised ecological sensitivity and connected river corridor habitat?
2. What assessment has been made of the cumulative effects of direct land-take, indirect development pressure, and construction impacts on the Colne catchment?
3. How will the Government ensure there is no net loss of biodiversity within the Colne Valley when the scheme directly removes large areas of Green Belt aquatic habitat and harms ecological connectivity through a 1000km2 catchment?
4. What evidence exists that proposed replacement or compensatory habitats will support the same species, functions, and long-term resilience as the habitats lost?
5. How will protected species, migratory species, and aquatic communities be safeguarded from noise, vibration, light, and hydrological change during construction and operation?
6. What legally enforceable arrangements will be put in place to secure river flows, water quality, and long-term habitat management?
7. Has the Government tested whether the scheme would conflict with local and regional biodiversity objectives, including river restoration and habitat connectivity goals?
8. What contingency arrangements are in place if pollution incidents, habitat failure, or ecological deterioration occur during construction or operation?