



Department
for Environment
Food & Rural Affairs

Landscape Recovery: First Round Project Proposal Form

Grant Reference: 9602

Project Reference: 34818

Date: 01 February 2022

Read the ITA document and all its annexes before completing this form.

Eligibility questions

- How many hectares of land do you propose to include in this Landscape Recovery project?

hectares

As part of your Technical Envelope on Bravo, you must upload maps showing:

- the project area and current land use (name this file
Your_project_name_map_current_land_use)
- the project area and proposed land use (name this file
Your_project_name_map_planned_land_use)

We recommend that you use the [Magic Map Application](#) to create your maps. We will accept any format, but maps must be clear and both maps must be at the same scale. You must clearly define the boundary of the project and indicate the sizes of all land parcels involved in the project on your map in hectares.

- Do you, or the land managers involved in your project, have complete management control of all land you propose to include in the project for the duration of the proposed agreement?

- Yes
 No

You must upload evidence of management control as part of your Technical Envelope on Bravo, for example:

- evidence to show that you are the landowner(s) of all land you propose to include in the project
- evidence that you are a tenant with complete management control of the land for the duration of the proposed agreement

Name these files Your_project_name_management_control_1, Your_project_name_management_control_2, and so on.

If there are multiple land managers involved in your project, or if you are applying on behalf of a single land manager, you must also upload evidence, for example a letter, that the land managers involved in the project consent to you applying on their behalf (name this file Your_project_name_consent).

- During the project development phase, you will be required to secure private investment for the project implementation phase, to complement funding from Defra. Do you accept that you may be removed from the scheme if you cannot secure private investment?

- ✓ Yes
- No

- Which theme are you applying for?
 - Species recovery
 - ✓ River and stream restoration
 - Both

Criteria questions

Refer to ITA annex D for guidance on answering these questions and information on how they will be scored. You should use this section to provide your answers to all the criteria questions in ITA annex D, except the ‘costs’ criterion, which you should answer by completing the development cost breakdown form (ITA annex F).

1. Longevity

What is the long-term vision for your project, and how will it enhance the local landscape for wildlife and people?

Applicant’s response (1,000 words maximum - 12pt Arial font)

The vision for our project partnership is that: ***The River Axe and its floodplain function naturally once again, providing clean water, rich wildlife habitats, flood and drought mitigation and superb opportunities for people to access nature. Adjoining farmland is managed extensively to support, enhance and connect these core riverine habitats. As a result, people and wildlife flourish, living in a nature-rich, resilient landscape that sustains viable enterprises and the wellbeing and livelihoods of our communities.***

The River Axe, a SSSI and SAC, is a nationally significant river that has been badly damaged over many years by a combination of diffuse agricultural pollution and changes to the river’s morphology. Soluble reactive phosphorus and suspended solids are the main water quality drivers for its failure. The river exhibits a range of ecological problems associated with high phosphate concentrations, with algal communities smothering the river bed and aquatic plants, silty river gravels and loss of salmonid spawning and juvenile river habitats. The problems affecting the SAC were first identified in the 1980s and many agencies and partners have since then attempted to resolve them, but the river remains in unfavourable condition and is declining.

The main symptoms and drivers of the problems affecting the SAC are:

- Modelling shows that approximately 30,000 kg of phosphorus (72% of the total) and 12,000 tonnes of sediments (50% of the total) are currently entering the river system from diffuse agricultural pollution.
- Increasing dairy herd sizes and maize production are the main drivers of intensification in the catchment.
- A high volume of fine sediment (most of the remaining 50%) is supplied to the river through a combination of bank erosion caused by channel weathering, invasive species and livestock poaching.

Channel modifications such as bank protection, channel re-alignment, re-sectioning, culverting and weir construction have led to reductions in channel morphological diversity, inhibiting natural geomorphological processes and in some instances, such as weirs, inhibiting the passage of migratory fish species.

Our project flows from The Triple-Axe Action Plan (3AAP), which was developed under the umbrella of the East Devon Catchment Partnership (EDCP). The 3AAP (see attached report) takes a catchment-wide, multi-partner approach to the recovery of the river. It assesses the underlying issues and trends and proposes an integrated, landscape-scale approach working with the three themes of Farming, People and Nature. This integrated approach was piloted in 2021-22 and is being further developed in 2022-23 and the results to date have informed this project. Whilst the Axe catchment does not yet have a county-based Local Nature Recovery Strategy, the 3AAP is a vital under-pinning element and a concrete delivery plan, based on an assessment of land use and associated opportunities.

Our **Upper Axe Landscape Partnership Project** targets river restoration across a significant part of the sub-catchment immediately upstream of the River Axe SAC. We selected this area because the benefits realised in this sub-catchment will be most effective in improving the condition of the SAC downstream and we have developed a partnership of farmers and landowners here who own and/or manage land along or very close to the river, who are keen to collaborate in realising our vision. For the first time a truly landscape-scale solution, that can take the radical steps needed to realise our vision, is within our grasp.

Our partnership manages land along a total of 23.6km of the River Axe and its tributaries. The river channel and the fields immediately adjoining the river forming the floodplain form our **Primary Area** where we will target the most significant interventions. This is because the river has become disconnected from its floodplain, as outlined in Question 2, and returning it to its natural wild geomorphic condition is our over-riding priority. Across the wider **Secondary Area** our work will complement this core work through adopting regenerative farming systems and re-naturalising land across the landscape.

Our targets are to:

- restore natural function to the river and tributaries throughout the Primary Area, totalling 506ha.
- restore spawning gravels in the Upper River Axe
- reduce diffuse pollution entering the river system by 50%, targeting phosphates and suspended sediments originating from farming activities and sediments released directly from excessive channel erosion across 2010 ha (our Total Project Area).

To do this, we aim to:

- make substantial interventions in the river such as installing large woody debris dams, re-armouring the river bed and restoring paleo-channels; these will reconnect the river to its floodplain, reduce bed and bank erosion and create vital fish spawning gravels.
- install natural structures and adapt bank profiles in the smaller tributaries to create similar benefits.
- convert all arable land in the Primary Area to either woodland, wetland or extensive permanent pasture.
- adopt extensive agricultural and silvicultural systems across a large proportion of the rest of the project area, including minimum till, undersowing of arable crops, introducing herbal leys to replace maize, planting new woodlands and hedgerows, using traditional native breeds and other regenerative practices that improve soil infiltration and health and improve and connect habitats.

As well as restoring, enhancing and protecting the river geomorphology and ecology within our Project Area, the works will provide significant support to the downstream River Axe SAC.

- by providing a natural water quality treatment zone the restored river and floodplain habitats will buffer the downstream River Axe from nutrient and sediment impacts of the remainder of the upstream Upper River Axe catchment.
- restored and enhanced aquatic habitats will provide vital upstream spawning grounds and refuges to support and give resilience to the River Axe SAC and SSSI species.
- properties and infrastructure downstream at Chard Junction and at Axminster will benefit from flood attenuation in the project area. The EDCP Flood Management Plan indicated the following as at risk of flooding: 34 properties at Axminster and 9 at Chard Junction within the Flood Warning Area; the Sewage Treatment Works at Chard Junction; the rail line at Chard Junction and south of Axminster; and the A358 at Weycroft.

Expand as required

2. Environmental objectives (river restoration theme)

How will your project deliver against the primary and secondary environmental objectives for the river restoration theme?

Only answer this question if you are applying for the river restoration theme or both themes. This question will be marked separately for each theme, so you should try to cover all 11 environmental objectives in this box, even if you are applying for both. When preparing your response, you should consider the balance of points available across these objectives under the river restoration theme.

Applicant's response (2,000 words maximum - 12pt Arial font)

In the following section the environmental objectives met are listed as either Primary (PO) or Secondary (SO) with their relevant number.

The River Axe is one of just thirteen rivers within England designated as an SAC. As with many rivers across England, the River Axe is declining in response to centuries of poor river and land management. Channel management, which focused on drainage improvement by increasing channel velocities, has destabilised the riverbed. The condition of the riverbed depends on it retaining river gravels and cobbles that predominantly were released from the hillsides during ice age periods. As the stone has been washed away, the riverbed has become exposed to rapid erosion which has increased the channel size, flow velocities, riverbank and bed failure, and rates of channel movement.

The loss and excess mobility of cobble gravel beds deprives Salmon, Trout, River Lamprey, Sea Lamprey and Bullhead of spawning habitat, as well as habitat for the floating vegetation (*Ranunculion fluitantis* and *Callitricho-Batrachion*) that the lower River Axe is designated for. The increased channel size and velocity has also meant loss of Water Vole, European Eel and Medicinal Leech habitat.

The intensification of agricultural practices in the area in recent decades has contributed towards these geomorphological problems by typically compacting soils and reducing rainfall infiltration, resulting in rapid overland flows that trigger erosion events more frequently. These overland run-offs also carry nutrient-rich soil sediments into the river system, together with leaching manures and fertilisers that further damage the ecology.

The project will focus on over 23km of the River Axe upstream of the River Axe SAC limit and include the catchments of three tributaries. The Large Woody Debris project at Magdalen Farm, which was led by the Environment Agency and delivered in close partnership with us and neighbouring landowners, has been inspirational both locally and nationally. It has shown what is possible and the positive results

already evident have stimulated our partnership to generate ambitious levels of change for nature.

The project looks to restore the River Axe and its floodplain corridor towards its natural wild geomorphic condition. The works will prevent further deterioration and ensure resilience of these habitats into the future. The project will restore the setting of the river within a more natural floodplain to provide a mosaic of water-dependent habitats of species rich floodplain meadows, wet woodlands, and wood pasture (PO3) which will support associated biodiversity and be resilient to flooding, drought and high temperatures (PO1).

The project will also change land use and land management practice along the River Axe and extending up through the River Synderford, the Cricket St Thomas and Hewood Bottom sub-catchments. This is needed to reduce nutrient and sediment release from the surrounding land and to reduce the flashy response to rainfall (PO2).

Along the River Axe, the project will investigate and deliver a range of river channel restoration options (PO1) including:

- mass introduction of large woody material (as trialled at Magdalen Farm in 2021, a project that has attracted national attention as a nature-based solutions geomorphological exemplar)
- brash mattress bed raising
- localised gravel and cobble augmentation
- full channel restoration by a combination of online channel bed and bank reconstruction
- offline realignment into paleochannels or equivalent forms.

Options that increase vegetation of the riverbanks and riparian corridor will be realised, along with enhancement of the floodplain, through woodland and shelter belt planting, nutrient and grazing control, and wetland creation, connecting habitats, buffering channels and riparian zones and creating a nature recovery network across the landscape with the river at its core (PO3, SO6).

The restoration of in-channel habitats including gravel and cobble beds will improve spawning and juvenile habitats for Atlantic Salmon, Brown (and Sea) Trout, River Lamprey, Sea Lamprey and Bullhead. The stabilisation of the bed materials will also provide greater opportunities for the establishment of floating vegetation (*Ranunculion fluitantis* and *Callitriche-Batrachion*) that the lower River Axe is designated for. On the River Synderford, which retains valuable trout habitat, further works to protect and re-naturalise the watercourse will be investigated. This will

include management and enhancement of its riparian corridors and feeder streams (SO4).

Water voles were widely present across the River Axe; however, only isolated populations now remain in deteriorating marginal habitat locations. Restoring the channel form and slowing its velocities, along with creating backwaters and wetlands within the floodplain, will create a wide range of habitats for reintroduction and protection of water voles on the Axe. Otters have never been lost locally but numbers remain relatively low. Improved fish abundance and in-channel and riparian habitats will support recovery of otter populations through enhanced foraging and breeding opportunities. The introduction of large woody materials to the river channel will increase habitat value for European eels with greater diversity of features and increased food sources (SO4).

The improved management and enhancement of riparian corridors and floodplain habitats will provide greater foraging opportunities for many bat species, especially important for rare and endangered species such as the grey long eared and greater horseshoe bats which are known to be in the catchment in low numbers (SO5).

Reconnection and re-naturalisation of floodplain habitats will increase opportunities for amphibians including Great Crested Newts and Common Toads through pond and wetland restoration. Kingfishers will also benefit from the enhanced in-channel habitats with greater fish numbers and woody materials in-channel to assist foraging. Sand martens and Reed Buntings will also benefit from enhanced riparian zones and wider floodplain habitats with increased food sources for foraging and nesting (SO5).

SO7: Reduces ammonia concentrations in the air or deposition on sensitive habitats.

Reductions in animal manures and fertiliser use through regenerative agriculture approaches in the Project Area will reduce ammonia releases.

SO8: Reduces levels of particulate matter in the air, particularly near heavily populated areas. No impact foreseen.

SO9: Reduces the likely harm from fires. No impact foreseen.

Himalayan balsam is a significant threat to the River Axe and there have been substantial community-led programmes to remove it from the catchment in recent years. These were hampered by the pandemic but our project will re-invigorate this initiative throughout the Upper Axe, which is also a good way to engage people in practical conservation action (SO11).

Spatial prioritisation

As well as restoring and protecting the river geomorphology and ecology within the project reach, the project will provide a significant support to the downstream River Axe SAC. This is the main justification for delivering the primary environmental objectives in this location, the recovery of the River Axe SAC and SSSI being an over-riding priority for our partnership and allied agencies and communities. The benefits for the River Axe SAC, which lies immediately downstream of our project Area, are three-fold and tackle specific problems that have been detailed above.

- Restored and enhanced aquatic habitats in the Project Area will provide vital spawning grounds and refuges to support and give resilience to the River Axe SAC and SSSI citation species. Priority species to be targeted are European Eel (threatened), Water Vole, Salmon, Trout, River Lamprey, Sea Lamprey, Otter, Medicinal Leech, Bullhead and Otter (SO4).
- By providing a natural water quality treatment zone the restored river and floodplain habitats will buffer the downstream River Axe from nutrient and sediment impacts from the upstream catchment (PO2).
- By slowing the flow in the main channel, as well as raising bed and water table levels, the works will have wider benefits. Flood risks in the downstream catchment will be managed. Floodplain habitats will become reconnected to the river, and wetland species supported. Floodplain wetlands will provide storage that mitigates against drought and provide treatment of sediments and nutrients carried from upstream in flood conditions. Increased woodland cover alongside the river will help maintain tolerable water temperatures for fish survival in heatwaves. Land loss through erosion, and sediment released through this to the downstream SAC river, will be reduced to natural rates (PO1).

The project area has significant benefits as a national trial for lowland river restoration. It represents a microcosm of the English countryside because within the project partnership) are:

- Large country estates / cultural heritage landowners,
- Smallholdings,
- Small and large family and corporate-owned farms
- Properties at acute risk of flood (Whatley Mill and Grade 1 listed Forde Abbey)
- An environmental landowner
- Dairy intensive farmers and commercial maize growers (land uses associated with water quality degradation)
- Organic and conventional farmers.

Scale

In terms of its scale, the project will deliver significant benefits to the SAC but it will not in itself be sufficient to deliver the full recovery of the River Axe SAC, which receives the water draining from a total area of 308 km². However, our project does develop a radical new approach to river restoration in a productive lowland farming setting that will act as an exemplar for the changes that are needed across our most productive farms in the Axe catchment (and by extension elsewhere in the country) if we are to restore our rivers. The damage that has been done to river function in the Axe catchment cannot be repaired by either land management changes or geomorphological interventions alone; it requires a synthesis of the two.

The scale of our project is, therefore, determined by the area of main river and tributaries that we can effectively work on within the timescales available, taking account of the complexity of the partnership involved, with 24 landowners and managers and many other community groups and stakeholders besides. We expect to provide valuable learning to DEFRA and partners on how to recruit and manage a partnership of this nature, which is likely to be typical in size for any lowland project under the Landscape Recovery scheme, given England's complex land ownership pattern and average farm sizes.

Equally, in river restoration, benefits multiply exponentially the larger the length of river restored. This is because as the energy of the river is reduced, sediments are deposited to raise the bed, scouring is reduced and the river accesses its floodplain where it can further dissipate its energy and feed wetland habitats, generating a virtuous circle of change. However, with small, fragmented interventions, benefits are much lower and are vulnerable to major flood events and these multiplier effects are harder to realise. The same is true for the wider landscape interventions; our 2010ha project area ensures that the amount of water and the quality of water entering the river from our partnership can also contribute significantly towards the river's restoration. Acting at sufficient scale is therefore the key and our project has sought to reach a scale and position within the overall Axe catchment that can trigger these beneficial feedback loops without becoming unmanageable.

Additionality

Future land use scenarios are hard to predict, especially so at the moment, but it is clear that for many landowners and managers in the Axe catchment more generally intensification is the default pathway in response to current uncertainty. The prospects for the River Axe SAC are therefore not bright, and our partnership offers an alternative vision and pathway that others will hopefully follow. However, at this point the partnership can only act and secure the potential substantial land use changes and major interventions needed and achieve its demonstration role through the medium of the Landscape Recovery scheme. Without it there may be piecemeal interventions and changes over a period of many years but that collective drive and

coordination to achieve simultaneous and radical change at the scale and pace needed would be all but impossible.

The attribution of benefits to the scheme will be based on a range of measures that will be established as baselines for future monitoring during the Development Phase. We expect these to include:

- Individual farm phosphate balances
- Soil testing and carbon audits
- Biodiversity audits including fish surveys
- Localised responses to flood and drought events

Expand as required

3. Carbon and climate resilience

3.1 Net Zero

How will your project contribute towards climate change mitigation?

Applicant's response (800 words maximum - 12pt Arial font)

We anticipate reducing carbon emissions and increasing carbon sequestration through the following mechanisms:

- Reducing ruminant livestock numbers through the adoption of extensive grazing systems on former intensively-grazed grassland, resulting in reductions in methane emissions and N₂O from manure.
- Converting arable land into extensively-grazed permanent grassland or herbal leys, reducing carbon emissions from cultivation and sequestering carbon in the soil.
- Creating new wetland habitats (including marsh, fen and wet woodlands)
- Planting new broad-leaved woodlands, wood pasture and hedgerows, adopting the right tree in the right place principles
- Accreting sediments in the river channel

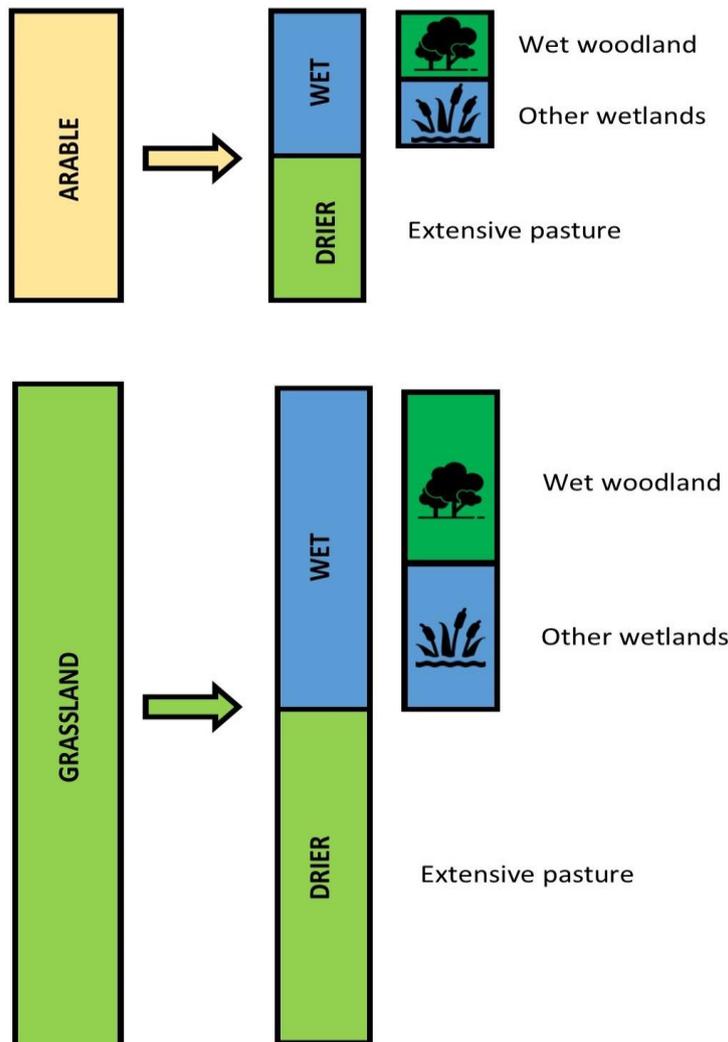
During the Development Phase we will establish a robust baseline by which these changes can be monitored and evaluated over the course of the project, recording livestock levels, land use, soil types and condition including soil organic carbon levels throughout the Project Area.

Calculating the value of these savings at this point in the project is fraught with uncertainties, as we lack detailed baseline data on soils, which is critical to assessing carbon sequestration potential. We also lack accurate predictions of future land use. However, we have worked from a set of assumptions as follows:

We assume that:

- in our Primary Area of 506ha, the soil type is mainly Alluvium which includes a wide range of soils of varied permeability, only some of which will be suitable for wetland creation. Current land use is 331ha of improved or semi-improved grassland, 89ha of arable, 66ha of woodland and 16ha of semi-natural grassland. We assume that all the arable area will be converted to woodland or extensive permanent grassland. 50% of the existing grassland will be planted as woodland / wood pasture, with the remainder becoming extensively grazed or converted to wetland.

- in the Primary Area 50% of the land outside of existing woodlands will be suitable for the development of new wetland habitats, ie 210ha.
- of this wetland suitable land, we will establish new wet woodland on 50% of the area (ie 105ha), and new marsh, mire or ponds on at least 10%. See diagram below.



- on arable land outside of the Primary Area (currently covering 541ha) 25% will be converted to extensive pasture, ie 135ha.
- the remaining arable land (406ha) will remain in arable, adopting lower-intensity and better-draining management practices.
- on improved pasture in the Secondary Area new woodland planting will cover 25% of the land, ie 248ha.
- across the whole Project Area we will see livestock levels reducing by a substantial factor.
- we are also not in a position at this stage to estimate the amount of carbon sequestration that will be achieved through river sediment accretion.

We have reviewed Natural England's report and taken estimates for carbon sequestration rates from there. The spreadsheet with our calculations included has been attached to our application.

Total tCO₂e ha⁻¹y⁻¹ saved: 7,950

NB: we have not calculated any carbon sequestration benefits for the change from intensive grazing to extensive grazing as it appears that the evidence for carbon sequestration in this scenario is lacking.

We believe that wet woodland carbon sequestration rates will be higher than those cited in the Natural England report for broadleaved woodlands, because wet soils accumulate carbon much more rapidly than drier soils. However, without quantified data to support this, we have only used the NE metric.

Expand as required

3.2 Climate resilience

How have you taken into account climate resilience in the design of your project?

Applicant's response (800 words maximum - 12pt Arial font)

Our project will help protect the River Axe, local residents and vulnerable species and habitats from the impacts of climate change, which are expected to include warmer temperatures, wetter winters, drier summers and the increased risk of heatwaves in the summer and intense rainfall at any time of year. Habitats and species in our area at risk include:

- spawning fish who lose access to spawning gravels due to erosion events in high flows and sediment deposition
- ponds, streams and rivers may dry out for longer periods; the loss of deeper pools on rivers threatens fish survival
- aquatic life is vulnerable to raised water temperatures, with Atlantic salmon and great crested newt being highly susceptible
- aquatic life is also vulnerable to the increased concentration of pollutants in periods of drought, and associated algal blooms
- wetland habitats and species that rely on humid conditions and wet habitats eg marsh fritillary butterfly
- birds, bats and other mammals that feed on invertebrates associated with wet conditions
- trees like beech and birch that are sensitive to drought
- bats, whose hibernation cycles may be disrupted
- trees are vulnerable to storm damage, with repeated disruption expected
- the spread of *Phytophthora ramorum* which has already had a devastating effect on the riparian alders of the Axe, and the frequency and magnitude of other diseases
- the increased spread of non-native species.

(ref [Climate Change and Devon's Environment Evidence Review, 2019; Westcountry Rivers Trust](#))

Channel management over the centuries has reduced the roughness of the channel leading to increases in flow velocity, which eventually led to mobilisation of the armouring cobble riverbed. The loss of the stable riverbed in the Axe has then triggered incision and channel enlargement. This in turn increases the concentration of flood flows, with an increase in stream power. More recently, the increased runoff from intensive farming has made flood flows more frequent, accelerating the deterioration of the river channel.

Climate change predictions indicate there will be an increase in flood flow frequency and magnitude. Without measures to address this, the decline of the River Axe will accelerate further.

The project will look to reverse this process by re-naturalising the channel and riparian corridor. Key outcomes from the work will be a reduction in in-channel flow velocities, as well as a reduction in channel size. The riverbed and banks will be further protected by either introduction of woody material or imported gravels and cobbles. Floodplains will be reconnected to dissipate flood flows.

Not only will these works restore the natural habitat conditions, but these will be more resilient to increases in flood flows that are predicted by climate change models.

Climate change is also expected to lead to increased occurrence of drought conditions, which the project will also look to increase resilience against. By reducing the size of the channels, and increasing the shading by strongly vegetated riparian corridors, drought flows will retain both the depth of water and lower temperatures to provide refuge to aquatic species. Improved rainfall infiltration in the upper catchment will also help recharge aquifers to help maintain river flow in times of drought.

The raising of the channel bed will also result in increased water table levels within the floodplain. This will improve the resilience of wet floodplain habitats and productivity of floodplain grazing meadows and woodland pasture during drought conditions.

Land management changes that reduce runoff rates will also retain water within the soils and recharge groundwater, thus increasing baseflows to provide further resilience against drought and support a more resilient agriculture.

We have consulted with specialists in the Environment Agency regarding the appropriateness of our project given the likely impacts of climate change and they have endorsed our approach.

Expand as required

4. Social impact

4.1 Access

How will you enable, enhance or maintain public access to your project?

Applicant's response (800 words maximum - 12pt Arial font)

While most of the project area is privately owned farmland, access for the public, for learning or recreation, is an integral part of our proposal. We will enhance public access by improving signage and maintenance of existing paths, and develop a network of permissive paths along the riverside called "The Upper River Axe Trail". As much of this as possible will be fully accessible, with thought given to other active travel such as cycle routes or bridleways.

Access is achieved through different means:

- Public footpaths, bridleways and quiet country lanes
- Historic landscapes and visitor attractions
- Guided walks and environmental education provision for pre-arranged groups
- Virtual access for those who cannot visit in person

Public footpaths, bridleways and quiet country lanes

A network of public rights of way runs through the project area, including the Liberty Trail which links our project to the national web of long-distance walking routes.

We propose to install interpretation boards at key sites on public rights of way, so the local community and visitors from further afield can gain an understanding of the habitat works they see, and the effects on water quality in the river.

We will upgrade unmade footpaths to wheelchair accessible paths, replacing styles with wheelchair-friendly kissing gates, so wheelchair users can gain a rare opportunity to interact with a rural riverside.

We will investigate the feasibility of making electric motorised all-terrain wheelchairs available for public use on a sign-out basis.

All this would be done with the ecological and environmental objectives in mind. Interpretation boards on the "River Axe Trail" will incorporate links to local heritage, focusing on the river, on how it has interacted over time with farming, and local historic crafts. For example: where the path runs by a group of willow trees we may

install information on how historically willow was used for weaving etc. We would also use these as teaching points for ecology and biodiversity. The interpretation boards will show how the river has been historically used by farmers, how it has changed, and include stories from older residents in the area about the river.

Historic landscapes and visitor attractions



The project boasts two historic estates, which are keystones to the local tourist industry – the Forde Abbey estate, with its 12th century grade 1 listed abbey at its heart, and Cricket St Thomas, which hosts a large Warner hotel. Accordingly, the project area is particularly well visited. In Forde Abbey’s historic gardens, 50,000 people per year roam freely right next to the River Axe. Habitat works, properly interpreted, will add a unique and fascinating new aspect to the site, and will form a positive feedback loop with the existing heritage attractions.

Guided walks and environmental education provision for pre-arranged groups

Magdalen Farm, home of the Magdalen Environmental Trust, hosts well over 5,000 people per year. Most of these visitors stay on site for 3 days in order to immerse themselves in environmental learning and therapeutic services.

At the farm, these visitors all have access to roam across 132 acres, including the riverbanks and streams that will be directly impacted by this project.

The Landscape Recovery project will form a new aspect of environmental learning on site, inspiring visitors from across southern England, including many from inner London and from disadvantaged communities.



Over 1000 adults and children with complex needs visit the varied landscape on Magdalen Farm (which includes woodlands, meadows, floodplains and wetland), using carefully maintained paths and gateways, some using all-terrain electric wheelchairs which we have available for their use. Next year, access will be further enhanced (not funded by the Landscape Recovery project) by new boardwalks to make existing and new wetlands accessible to all.

Other than when works make an area temporarily unsafe this 'access to roam' will continue to be unlimited for all visitors.

Virtual access for those who cannot visit in person

Due to personal circumstances, some people who are interested in the project will never be able to visit. The project will have its own website, on which we will make available an interactive model that shows the project impacts and the environmental damage the project is designed to address. This will be a virtual version of the physical models that will be installed in the project area (please see below, Q4.2 for more details of these models).

Public Access

We estimate that these enhancements could see:

- At least 55,000 annual visitors physically accessing parts of the project at Forde Abbey and Magdalen Farm
- An additional 10,000 people using the new footpath network.
- Between 4.5 and 18 kilometres of additional active travel pathway created or renovated and made accessible to all.

4.2 Social benefits

How will your project achieve social benefits (for example, opportunities for people to connect with nature)?

Applicant's response (800 words maximum - 12pt Arial font)

Magdalen Farm has a long history of connecting people of all abilities and all walks of life with nature – it is central to our charitable purpose. All our visitors experience the therapeutic benefits that being close to nature brings. Our main aims as a charity are to give children, young people and adults including those with complex needs an outstanding and unique educational environment in which to connect with nature, learn from sustainable living and enjoy time together in the countryside.

We already work with many different groups, these include:

- adults and young people suffering poor mental health,
- young refugees and trafficked children,
- people with learning or physical difficulties and their families,
- disadvantaged children from inner cities and more local areas,
- young carers
- mainstream schools and colleges.



Through the Landscape Recovery programme, our partnership will not only deliver more opportunities for these groups, but also expand the scope and reach of inclusion services to reach others who are under-represented in the countryside, and who live in disadvantage. Our dedicated facilities on Magdalen Farm provide

an excellent base for people to participate in the project both on site, and across the project area. In addition, under our mentorship, partner landowners will be able to facilitate volunteer programmes or working holidays from their farms.

While full details of the programme will be worked up in the Development Phase, we already know it will include:

- Citizens science programmes specifically undertaken by adults with diagnosed mental illness, whose involvement forms part of their recovery. We anticipate using our links with organisations in London to reach people who experience mental illness and who have very limited access to nature.
- Subsidised residential educational trips for children / families from inner city communities that score highly in the indices of multiple deprivation. They will learn about the river restoration work, (resulting in even more public access to the core sites). Our curriculum already includes sessions based beside and sometimes in the river which can be further enhanced to include the restoration work to take place through this project.
- Visitors and our team of volunteers, (who are a mix of local people and those visiting from other parts of the UK or internationally), will be involved in citizen science opportunities to monitor the regeneration of habitats and populations of species as well as undertaking practical works. These volunteers, (we already have 25 volunteers delivering approximately 10,400 hours of volunteering per year), will continue to be involved in the majority of the work maintaining in-channel and riparian habitat works throughout the land encompassed by our project.



By working in partnership with voluntary sector organisations across the country whose role it is to represent and support our target groups, we will create opportunities specifically for under-represented groups to contribute to the project as volunteers. This will include people from the BAME and LGBTQ+ communities. We will provide accommodation and catering to remove any economic barriers to

their involvement. There is the strong potential of working in partnership with the Wild Days Conservation, (with whom we have existing links), who have taken the concept of conservation working holidays from the third sector and added ecology, education and a level of quality which was previously lacking sector-wide.

To deliver this social benefit, we will invest in enhancements to our educational resource centre, creating more space for the increased volunteers and visitors.

We also plan to create interactive physical models to show visitors the river as it currently is, and our plans for restoration. These can be used as learning tools, in which visitors can create their own ideas of restoration to see what the impacts and effects are in the immediate area and further downstream. This could be as simple as showing how water courses change over time or how bank erosion can gradually or suddenly happen or to create a virtual simulation which would be available online. To get the most interaction we would also look to install this modelling at key places throughout the project area (such as Forde Abbey), as well as our own site on Magdalen Farm. If possible, we would also look to install 'river-watch' webcams at strategic points in the area for public view.

Our project can demonstrate how erosion control and the management of flooding can deliver heritage and social outcomes as well as environmental outcomes.

All the above will be incorporated into online interactive tools to provide a real-world learning tool and engagement for those who cannot visit in person. Modelling landscape changes online can be made fun - the wider public may engage for recreation as well as for learning.

4.3 Engagement

How do you plan on involving local communities and engaging with people impacted by your Landscape Recovery project?

Applicant's response (800 words maximum - 12pt Arial font)

Our Project Area, 980 hectares of which lies within the Dorset AONB, sits in a landscape typical of much of rural England, with scattered hamlets, villages and small towns connected by minor roads and largely retaining a sense of tranquillity and remoteness. An industrial estate at Chard Junction, significant tourist infrastructure at Forde Abbey and Cricket St Thomas and agricultural enterprises are the main loci of economic activity but the area also supports high levels of self-employment and many small businesses. The parishes of Thorncombe and Winsham (populations of 699 and 748 respectively) are within our Project Area; the larger community of Tatworth/South Chard (population 2,660) adjoins the area to the west and the larger market towns of Chard, Axminster and Crewkerne, with a combined population of 29,600, lie within a 10km radius. Housing needs, transport, activities and employment for younger people and rural isolation are common issues for these communities.

Our goals for engaging these communities during the Development Phase focus on a consultation process, where we will:

- identify stakeholders who might be affected by the project.
- consult people on our plans and seek their ideas, support and trust.
- identify issues and potential conflicts.
- informed by this, develop the project and its proposed aims, phases, implementation and outcomes to ensure it maximises benefits for local people.
- gain support from local organisations including local government and community groups.
- properly recognise and celebrate the community's contribution to the project.

When we move into the Implementation Phase we will build upon these relationships and social capital to ensure we deliver the community benefits identified. We'll remain open to local people's insights, act on opportunities and pre-empt issues emerging. We will employ a Project Manager during this phase whose role will be partly dedicated to community engagement work.

The landowners and farmers who are such a significant part of our partnership are themselves important members of the wider community and they will act as Ambassadors and connectors for our work.

The [Axe Vale Rivers Association](#) (AVRA) a voluntary group, is a significant project partner and will contribute as a founder-member of the CIC set up to run the project. AVRA has extensive local connections and a track record of engaging people with the river. AVRA will play a leading role in connecting the project with local communities, and delivering citizen science programmes.

We will work closely with local parish councils to deliver our community engagement programme. Other organisations who will help us deliver our programme and have been contacted in the course of developing our project are:

- Thorncombe Environmental Group
- Chardstock Eco Group
- Winsham Parish Council
- Thorncombe Parish Council
- Somerset Council
- Dorset Council
- Taunton Fly Fishers
- Axe Fly Fishers
- The Environment Agency
- Westcountry Rivers Trust
- Salmon & Trout Conservation
- Riverfly
- Wild Trout Trust
- 3 AONBs (Blackdown Hills, East Devon & Dorset)
- 7 local primary schools
- The National Farmers Union
- Dorset and Somerset Wildlife Trusts
- Winsham Walkers

Engagement activities we plan to deliver include:

- **Community Engagement Meetings.** These public meetings will keep everybody informed of the intentions of the project with the opportunity to contribute throughout the whole process so we can understand the opinions and needs of local people and ensure they feel empowered and have a sense of ownership.
- **Roadshow stalls.** To ensure we are reaching the most people, in addition to our targeted work, we will have information and “have your say” stalls at

village shops and village halls. We'll also attend local events and gatherings.

- **Promotion and public materials.** We will publicise meetings in local media, online, through parish councils and other local groups. We will create useful and relevant promotional and project update material in all accessible formats and other languages as necessary.
- **Website Development.** Our project website will enable people to learn about the project and express their views. This will be frequently updated on progress and will provide access to the riverwatch webcams and the interactive river modelling program.
- **Recruitment of Volunteer Groups.** Our volunteer groups include local people and those from underrepresented groups. Their opinions will be valued as part of any consultation process and are important to enhance the diversity of engagement.

We will develop a longer-term engagement plan early in the Development Phase. This will feed into the overall monitoring and evaluation plan at both development and implementation stages. This will measure the impact and success of the strategy and identify learning points to influence development as the project continues. This is vital to ensure stakeholder and public support and engagement remains high throughout the project.

5. Project leadership and delivery

What governance structure are you planning for your project?

Applicant's response (1,000 words maximum - 12pt Arial font)

Governance

This application is being made by The Magdalen Environmental Trust, a registered charity, on behalf of a partnership of 23 landowners and farmers and a community group. The Trust is also a farmer and landowner in the project area. Should our application be successful, the Trust will establish a Community Interest Company (CIC) during the enrollment stage, to be named **The Upper Axe Landscape Recovery Partnership CIC**, to deliver the project. This will be the single legal entity who will be the signatory to the Landscape Recovery agreement. It will be wholly owned by the Magdalen Trust in the first instance but will be independently governed and will have its own bank account. During the Development Phase, we expect the CIC will become independent of the Trust.

The CIC will be a large membership model CIC limited by guarantee. All the project partners will ultimately be members and they will appoint a Board of Directors to act as the executive for the partnership.

EA, Natural England and DEFRA representatives will be invited to observe the meetings of the CIC and support the project's development.

The Board will take all decisions for the project on behalf of the partnership and its agenda and minutes will be available to all partners. It will meet monthly for the duration of the Development Phase. All members of the CIC will meet quarterly as the Project Partnership Group, for the duration of the Development Phase, to keep partners informed, feedback on developing issues, share experience and hold focused workshops to refine the project.

All partners have committed to:

- The Magdalen Environmental Trust acting as lead applicant for the project
- Participate in the Project Partnership Group, helping ensure the Project is delivered to a high quality
- Share relevant information, skills and practices
- Enable specialists to access project land to carry out surveys and feasibility studies
- Deliver any other relevant actions ascribed to the Partners in the Project Action Plan

This commitment, currently made by email, will be formalised via a memorandum of agreement entered into by all the partners during the enrolment stage.

The CIC will oversee and implement the Project Action Plan during the Development Phase including employing staff, commissioning consultants, liaising with the EA and DEFRA, and managing the financial and administrative aspects of the project. Our expectation is that it will continue in this role in the Implementation Phase although one of the tasks in the Development Phase is to review governance arrangements and ensure they are fit for purpose for the Implementation Phase.

Our Project Action Plan (attached) details the work planned for the Development Phase. In summary:

- A Project Manager will be responsible for coordinating activities, commissioning contractors, reporting to DEFRA, the EA and partners, facilitating the work of the CIC and stakeholder engagement.
- A Farm Advisor will lead on the farm advice elements, producing a Farm Management Plan for each farm based on the findings of consultants.
- Supervision and support for these posts will be provided by a Senior Project Manager and a Senior Farm Advisor (contracted in, each for 1 day/week).
- Ecological, hydrological and farm business consultants will be commissioned to develop detailed plans for the river corridor and feed into the farm management plans.
- A private investment consultant, monitoring and evaluation consultant and community activity plan consultant will also be commissioned.

All costs for undertaking this work will be met from the funding managed by the CIC.

Land

The partnership's total Project Area consists of 2,054ha of contiguous land over which the partners have security of tenure for the duration of the agreement term, and this is shown on our Partnership Land Holding Map. Tenants on this land have been consulted and are supportive of the land entering into the Development Phase.

Although the West of England main railway line bisects the Project Area, running roughly parallel with the river, and is a structure that cannot be removed, the main river and its tributaries run under the railway at multiple points and provide hydrological connectivity to our project.

There are some minor breaks in the land-based contiguity of the land in our Project Area but the river system provides hydrological connectivity through these breaks.

Implementation Phase

During the Development Phase Farm Management Plans will be made for each farm / land holding included in the project, detailing the changes that will take place during that period and how these will be funded. These will be integrated into a 20-year Masterplan for the whole Project Area. Subject to advice during the Development Phase these plans will be formalised and covenants drawn up to ensure that tenants and landowners continue to deliver the plans at least for the duration of the Implementation Phase.

In the Implementation Phase the members of the CIC will continue to appoint the Board of Directors and hold it to account at the AGM. The CIC will manage all agreements relating to the overall project other than those entered into directly between project partners and funders, where these are appropriate. Overall project agreements are likely to include those relating to community engagement, public access, green finance, private investments and funding agreements for major capital works, especially where these are located on multiple land holdings.

Key risks and constraints in this phase are:

- Change of tenancy or ownership; to be mitigated by covenants on the land.
- Failure to realise forecast benefits; to be mitigated by close project management, monitoring and evaluation and early warning systems to tackle failures.
- Failure to secure capital and revenue funding, including from private investors; to be mitigated by a robust funding plan.
- Partners losing confidence in the Partnership, failing to make decisions collectively or feeling excluded from decision-making; mitigated by good communications, strong leadership and facilitation, maintaining stakeholder engagement and promoting the benefits of the project to a wide audience. Delivering this is likely to entail the employment of a Project Manager through the Implementation Phase.

Expand as required