Improvement Programme for England's Natura 2000 Sites (IPENS)

Planning for the Future

Site Improvement Plan

River Camel

Site Improvement Plans (SIPs) have been developed for each Natura 2000 site in England as part of the Improvement Programme for England's Natura 2000 sites (IPENS). Natura 2000 sites is the combined term for sites designated as Special Areas of Conservation (SAC) and Special Protected Areas (SPA). This work has been financially supported by LIFE, a financial instrument of the European Community.

The plan provides a high level overview of the issues (both current and predicted) affecting the condition of the Natura 2000 features on the site(s) and outlines the priority measures required to improve the condition of the features. It does not cover issues where remedial actions are already in place or ongoing management activities which are required for maintenance.

The SIP consists of three parts: a Summary table, which sets out the priority Issues and Measures; a detailed Actions table, which sets out who needs to do what, when and how much it is estimated to cost; and a set of tables containing contextual information and links.

Once this current programme ends, it is anticipated that Natural England and others, working with landowners and managers, will all play a role in delivering the priority measures to improve the condition of the features on these sites.

The SIPs are based on Natural England's current evidence and knowledge. The SIPs are not legal documents, they are live documents that will be updated to reflect changes in our evidence/knowledge and as actions get underway. The information in the SIPs will be used to update England's contribution to the UK's Prioritised Action Framework (PAF).

The SIPs are not formal consultation documents, but if you have any comments about the SIP or would like more information please email us at IPENSLIFEProject@naturalengland.org.uk, or contact Natural England's Responsible Officer for the site via our enquiry service 0300 060 3900, or enquiries@naturalengland.org.uk

This Site Improvement Plan covers the following Natura 2000 site(s)

UK0030056 River Camel SAC

Site description

In addition to the River Camel the SAC includes its main tributaries, with associated woodlands, willow carr, wet meadows, wet heath and mire habitats. The river system encompasses a range of ecological conditions with both upland and lowland characteristics and is important for otters, bullhead and Atlantic salmon. Some of the largest and best remaining ancient semi-natural woodlands in Cornwall are found alongside the Camel.

Plan Summary

This table shows the prioritised issues for the site(s), the features they affect, the proposed measures to address the issues and the delivery bodies whose involvement is required to deliver the measures. The list of delivery bodies will include those who have agreed to the actions as well as those where discussions over their role in delivering the actions is on-going.

Priority & Issue	Pressure or Threat	Feature(s) affected	Measure	Delivery Bodies
1 Water Pollution	Pressure	S1106 Atlantic salmon, S1163 Bullhead	Implement phosphorus (P) stripping at Nanstallon Sewage Treatment Works (STW), and investigate the impacts of St Breward, St Teath, Delabole and St Mabyn STW	Environment Agency, South West Water Ltd
2 Water Pollution	Pressure/ Threat	S1106 Atlantic salmon, S1163 Bullhead	Implement agreed actions within the Diffuse Water Pollution Plan	Environment Agency, Natural England
3 Inappropriate weirs dams and other structures	Pressure/ Threat	S1106 Atlantic salmon, S1163 Bullhead	Removal or modification of instream structures considered to have high or medium impact	Environment Agency, Natural England
4 Invasive species	Pressure/ Threat	H91A0 Western acidic oak woodland, H91E0 Alder woodland on floodplains	Implement programmes to control Himalayan balsam and other invasive species	Environment Agency, Forestry Commission, Natural England, Westcountry Rivers Trust
5 Water abstraction	Pressure	S1106 Atlantic salmon, S1163 Bullhead	Re-evaluate the impacts of the De Lank abstraction on favourable condition, and amend licence. Resolve the outstanding unlicensed abstraction at Hingham Mill	Environment Agency, Natural England, South West Water Ltd
6 Forestry and woodland management	Pressure	H91A0 Western acidic oak woodland	Implement the woodland management plan	Forestry Commission

7	Deer	Pressure	H91A0 Western acidic oak woodland	Review the effectiveness of existing deer control measures and implement improvements where appropriate	Forestry Commission, Natural England

Issues and Actions

This table outlines the prioritised issues that are currently impacting or threatening the condition of the features, and the outstanding actions required to address them. It also shows, where possible, the estimated cost of the action and the delivery bodies whose involvement will be required to implement the action. Lead delivery bodies will be responsible for coordinating the implementation of the action, but not necessarily funding it. Delivery partners will need to support the lead delivery body in implementing the action. In the process of developing the SIPs Natural England has approached the delivery bodies to seek agreement on the actions and their roles in delivering them, although in some cases these discussions have not yet been concluded. Other interested parties, including landowners and managers, will be involved as the detailed actions are agreed and delivered. Funding options are indicated as potential (but not necessarily agreed or secured) sources to fund the actions.

1 Water Pollution

The draft local plan currently provides for an additional 3000+ houses in the catchment. This will increase the sewage discharge loading to the Camel. Action is needed to ensure that future development, allowed within existing water discharge permits across the sewage treatment works (STWs) in the River Camel catchment, does not result in the deterioration in existing water quality through an increase in nutrient concentration. Both the WFD P target (50ug/l) and the SAC P target (40ug/l) are currently exceeded downstream of Nanstallon STW. Upstream on the main River Camel the P target of 40 ug/l has been met apart from an exceedence for a short distance below St Breward STW. The most recent EA model for the River Allen which forms part of the River Camel SAC predicts that concentrations of orthophosphate are significantly elevated downstream of St Mabyn, St Teath and Delabole STWs, contributing to breaches of the P target set out in the Conservation Objectives for this SAC. Elevated phosphorus levels can result in enhanced plant growth leading to large diurnal sags in dissolved oxygen levels, affecting fish survival, and can have negative impacts on food supply, the state of spawning gravels and egg survival.

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
1A	Improve the discharge of Nanstallon sewage treatment works - to enable P removal to 1 mg/l Total P as the annual average and to accommodate additional growth in housing up to approximately 1550 homes. Development beyond the current permitted flow of the STW would require a permit variation and through this process the EA will ensure that there is no adverse effect on the River Camel as a result.	Not yet determined	2015-20	Water Industry Asset Management Plan (AMP): Implement Plan Scheme	AMP process	South West Water Ltd	Environment Agency

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
1B	Investigation into the extent to which the discharge from St Breward STW is contributing to elevated P levels in the main River Camel, and the ecological impacts of this discharge.	Not yet determined	2015-20	Investigation / Research / Monitoring	AMP process	Environment Agency	South West Water Ltd

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
1C	If local EA investigation suggests St Breward STW might be contributing significantly to elevated P levels in the SAC, implement formal investigation into impacts of St Brewards STW through Periodic Review in 2019 (PR19).	Not yet determined	2019-24	Water Industry Asset Management Plan (AMP): Implement Investigation	AMP process	South West Water Ltd	Environment Agency

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
1D	Investigation on River Allen to clarify whether further investment in P stripping at St Mabyn STW, St Teath STW or Delabole STW is required to achieve the interim progress targets set out in the second cycle of the River Basin Management Plan (RBMP2) and the River Camel SAC conservation objective targets by 2027, and avoid adverse impacts from further predicted further housing growth in the local area.	Not yet determined	2015-17	Water Industry Asset Management Plan (AMP): Implement Investigation	AMP process	Environment Agency	South West Water Ltd

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
1E	If the above action concludes that further investment is required to achieve interim progress P targets for the River Allen, then appropriate remedial action would be required at STW under PR19.	£2,100,000	2019-24	Water Industry Asset Management Plan (AMP): Implement Plan Scheme	AMP process	Environment Agency	South West Water Ltd

2 Water Pollution

Diffuse pollution contributes to elevated sediment and phosphate levels with associated impacts on salmon and bullhead. A recent (2014) walkover survey of the catchment has identified 17 grade 1 diffuse pollution sources, 54 grade 2 and 303 grade 3 sources - the main sources are from livestock and arable fields, attributed to runoff and farm/field drainage.

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
2A	Implementation of actions identified within the River Camel Valley and Tributaries DWP Plan (May 2014 or as updated).	£2,100,000	2014-21	Diffuse Water Pollution Plan	Environment Agency, Natural England, Rural Development Programme (RDPE), Water Framework Directive (WFD)	Natural England	Environment Agency

3 Inappropriate weirs dams and other structures

25 instream structures(excluding bridges) are present within the SAC affecting fish movement, sediment movement and natural processes.

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
3A	Implement the Camel River Restoration Strategy, including as high priority the removal or modification of in-stream structures considered to have high or medium impact on favourable condition (as per River Camel Restoration Plan: Geomorphological assessment of physical modifications, Atkins March 2012); partnership development with landowners and fishery managers to help develop river and riparian habitat restoration projects as required under the wider Camel River Restoration Strategy.	£2,500,000	2015-27	River Restoration Plan: Restoration Project	Environment Agency, Natural England, Rural Development Programme (RDPE), Water Framework Directive (WFD), Conservation Enhancement Scheme (CES), Flood and Coastal Erosion Risk Management (FCERM) 2015-21	Environment Agency/ Natural England	n/a

4 Invasive species

High impact invasive non-native species affecting the site include Himalayan balsam which is invading wet woodland and fen habitats. Continued control is required beyond the current planned activity to avoid Himalayan balsam spreading back into areas previously cleared. Laurel, rhododendron and pines within woodlands also require management (eg Clerkenwater Woods), while sycamore and beech are over-frequent in some areas.

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
4A	Control of Himalayan balsam and other high impact invasive species, by including biological control if possible.	£300,000	2015-20	Invasive Control Plan: Invasive Species Control Programme	Environment Agency, Natural England, Water Framework Directive (WFD)	Natural England	Environment Agency, Westcountry Rivers Trust

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
4B	Control of woodland invasives (laurel, rhododendron, pines, sycamore, and beech in some areas).	£320,000	2015-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Rural Development Programme (RDPE)	Forestry Commission	n/a

5 Water abstraction

The South West Water (SWW) De Lank abstraction and the unlicensed abstraction on the Allen to Hingham Mill may be affecting river flows.The Hingham Mill abstraction is a priority to resolve as it is likely to be affecting salmon movement up the Allen. The Keningstock abstraction also results in a heavily depleted reach.

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
5A	Re-evaluate the impacts of De Lank Public Water Supply abstraction on favourable condition, and amend licence as appropriate.	Not yet determined	2015-20	Water Industry Asset Management Plan (AMP): Abstraction Licence - Revoke/Amend	Not yet determined	Environment Agency	South West Water Ltd

Action	Action description	Cost estimate	Timescale	Mechanism	Funding option	Delivery lead body	Delivery partner(s)
5B	Hingham Mill: Carry out a study to evaluate impacts of offtake/instream structures on fish movement and ecology of the depleted reach to provide evidence, and then implement appropriate mitigation to minimise the impact.	£15,000	2014-17	Investigation / Research / Monitoring	Not yet determined	Environment Agency	Natural England

6 Forestry and woodland management

Management of Bodrigan wood is needed to restore the age class diversity of planted blocks. In addition woodland along mid Camel/Clerkenwater requires improved management (including to rides with respect to rare vascular plants).

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
6A	Implement the appropriate management of mid-Camel woodlands through liaison with land owners and Forestry Commission.	£32,500	2016-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Rural Development Programme (RDPE)	Forestry Commission	Natural England

7 Deer

Deer browsing is negatively affecting the regeneration of trees and the ground flora of the woodland. The impact of existing efforts to manage deer need to be reviewed and improved if possible.

Action	*Action description*	*Cost estimate*	*Timescale*	*Mechanism*	*Funding option*	*Delivery lead body*	*Delivery partner(s)*
7A	Review current methods used to control deer grazing within SAC woodlands and evaluate impact on deer populations. Implement improvements with funding from Forestry Commission if appropriate.	£60,000	2016-20	Rural Development Programme for England (RDPE): Common Agricultural Policy 2014-20 (New Environmental Land Management Scheme)	Rural Development Programme (RDPE)	Forestry Commission	Natural England

Site details

The tables in this section contain site-relevant contextual information and links

Qualifying features

#UK Special responsibility

River Camel SAC	H91A0 Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles
	H91E0# Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)*
	S1106 *Salmo salar:* Atlantic salmon
	S1163 *Cottus gobio:* Bullhead
	H4030 European dry heaths
	S1355 *Lutra lutra*: Otter

Site location and links

River Camel SAC

Area (ha) **621.17** *Grid reference* **SX061708**	Map link
Local Authorities	Cornwall
Site Conservation Objectives	European Site Conservation Objectives for River Camel SAC
European Marine Site conservation advice	n/a
Regulation 33/35 Package	n/a
Marine Management Organisation site plan	n/a

Water Framework Directive (WFD)

The Water Framework Directive (WFD) provides the main framework for managing the water environment throughout Europe. Under the WFD a management plan must be developed for each river basin district. The River Basin Management Plans (RMBP) include a summary of the measures needed for water dependent Natura 2000 sites to meet their conservation objectives. For the second round of RBMPs, SIPs are being used to capture the priorities and new measures required for water dependent habitats on Natura 2000 sites. SIP actions for non-water dependent sites/habitats do not form part of the RBMPs and associated consultation.

Additional information is provided on targets for flow and some water quality parameters, in order to meet the conservation objectives for certain Natura 2000 sites. The relevant targets are identified in the revised conservation objectives document (see link to PDF below).

These targets have been revised for a number of Natura 2000 rivers and lakes, following a review by the conservation agencies of Common Standards Monitoring Guidance. For rivers, this is done through local discussions between Natural England and Environment Agency staff. For lake sites, the only parameter where alignment of standards was reviewed was phosphorus and so this work was undertaken jointly at a national level.

The linked PDF documents include the proposed target values, and also set out an 'interim progress goal', that will need to be achieved by 2021. Where sufficient information is available the document also identifies a timescale for achievement of the longer-term target. For any sites where it has not been possible to agree specific targets, usually because further technical work is required, these will be indicated in the documents by an asterisk. For further information please see Part 2 of the River Basin Plan

River Camel SAC

River basin	South West	South West RBMP
WFD Management catchment	North Cornwall, Seaton, Looe and Fowey	
WFD Waterbody ID (Cycle 2 draft)	GB108049000020, GB108049000030, GB108049000040, GB108049000050, GB108049000060, GB108049000190, GB108049006980, GB108049007030, GB108049007040, GB108049007050, GB108049007060	
Locally revised Conservation Objectives	Moving towards common standards monitoring guidance targets for SAC rivers	
Additional information on locally revised Conservation Objectives	n/a	
EA/ NE agreed RBMP lake SAC targets	n/a	

River Restoration Plan

Source of information on river restoration plans for SAC rivers where these are in place or planned, with links to documentation where this is available.

Webpage link: Restoring Designated Rivers	Restoring Designated Rivers
River Restoration Plan document	River Camel Valley and Tributaries SSSI and SAC

Overlapping or adjacent protected sites

Site(s) of Special Scientific Interest (SSSI)	
River Camel SAC	River Camel Valley & Tributaries SSSI
	Bodmin Moor, North SSSI

National Nature Reserve (NNR)	
River Camel SAC	n/a

Ramsar	
River Camel SAC	n/a

Special Areas of Conservation (SAC) and Special Protection Areas (SPA)	
River Camel SAC	n/a

Version	*Date*	*Comment*
1.0	06/10/2014	