

Table 1 - Assessment Results (Interim) - results of our Quantitative Impact Assessment/summary of provisional HRA conclusions per species

Species	A	B	C	D	E	F	G	H		HRA provisional Conclusion (brief summary of provisional conclusion, based on quantitative assessment and qualitative narrative. The full assessment to be provided within HRA once finalised)
	No. of fish lost due to HPC Impingement	No. of fish lost due to HPC Entrainment	No. of equivalent adults lost due to HPC Impingement	No. of equivalent adults lost due to HPC Entrainment	Total No. of equivalent adults lost due to HPC Entrainment	Total Tonnes of equivalent adults lost due to HPC Entrainment	Population Unit SSB(tonnes) / Fishery (tonnes)/ number of fish	Annual proportional loss from the population due to HPC entrainment (key result considered in HRA)		
Marine assemblage species for Severn Estuary SAC and Ramsar										Species listed below are considered both quantitatively and qualitatively and the wider marine assemblage is considered by narrative
European sprat	1,322,637 (fish) 3,557,152 (larvae)	3,557,152 (larvae)	3,482,256	124,500	3,606,756	55.90	7,704	0.7%	1%	Predicted impact considered not of concern within the marine assemblage due to the healthy abundance of this species.
Whiting	1,708,720 (fish)		662,984		662,984	197.57	2,179	9%	23%	We have concerns over the level of impact predicted due to the high losses predicted and the value this species provides in the local ecosystem.
Dover sole	157,565 (fish) 324,176 (larvae)	1,106,693 (larvae) 991,212 (eggs)	170,362	0.02	170,362	60.14	809	7%	11%	Predicted impact considered not of concern within the marine assemblage due to healthy local population trends.
Atlantic cod	302,034 (fish)		51,648		51,648	245.12	1,118	22%	36%	We have concerns over the level of impact predicted due to the concerns of the sustainability of the local and wider population. ICES current advice is zero catch to allow the species to recover.
Atlantic herring	37,549 (fish) 221,128 (larvae)	193,487 (larvae)	114,464	267	114,731	7.46	157	5%	6%	We have concerns over the level of impact predicted due to the concerns of the sustainability of the local and wider population. The status of the stock in the Bristol Channel is uncertain and not assessed, but adjacent ICES stocks are considered to be at increased risk of fishing pressures and have a reduced reproductive capacity.
European seabass	23,626 (fish) 13,129,264(larvae)	6,108,346 (larvae) 9,456,586 (eggs)	14,401	0.0001	14,401	16.17	565	3%	5%	We have concerns over the level of impact predicted due to the concerns of the sustainability of the local and wider population and the important role it plays in the food web. ICES determine that stock development is decreasing over time and is presently functioning at a reduced reproductive capacity.
European plaice	1,446 (fish) 550,129 (larvae)	1,300,201 (larvae)	16,630	15	16,646	5.33	1,332	0.4%	0.3%	Predicted impact considered not of concern due to the very low impact levels predicted and abundance of this species.
Thornback ray	2,358 (fish)		1,457		1,457	4.78	122	4%	5%	Predicted impact considered not of concern within the marine assemblage due to healthy local population trends.
Blue whiting	7,375 (fish)		2,862		2,862	0.39	514,008	0.0001%	0.0001%	Predicted impact considered not of concern due to the very low impact levels predicted and abundance of this species.

Migratory assemblage and/or Annex II species for Severn Estuary SAC and Ramsar										
European Eel	341 (fish)	538,346 (glass eel)	341	32,398	33,739	Ent: 10,657 Imp:0.112	331.248 (entrainment assessment) 213.709 (impingement assessment)	3%	7%	The European Eel global stock is listed as Critically Endangered. HPC will reduce annual recruitment (via entrainment) and escapement (via impingement) over the 60+ year life of the project, on a measure which is failing its sustainability targets by a long way and is forecast to do so for some time. It is not possible to conclude no adverse effect upon site integrity.
Twait shad	763 (fish)		117		117		86,696	0.1%	1%	The twait shad has experienced a population decline over the last 40 years. Against this background of declining populations, with the feature currently in unfavourable condition, it is considered that these predicted losses could prevent the species from being maintained at, or restored to favourable conservation status or a sustainable level.
Allis shad	23 (fish)		9		9		1,083	0.9%	8%	The modelled losses at HPC are likely to put further pressure on this small and declining population, while also preventing population recovery. The predicted impact, coupled with the small population size, could prevent the feature from being maintained at, or restored to, favourable conservation status or a sustainable level.
Sea lamprey	103 (fish)		103		103		15,269	0.7%	2%	New information has indicated population may be lower than predicted. Data deficiency limits ability to estimate losses, but the predicted impact, together with paucity of knowledge of local population biology, means we cannot be certain impacts will be below a level that would allow the species to be maintained or restored to favourable conservation status or a sustainable level.
River lamprey	20 (fish)		20		20		116,109	0.02%	0.04%	The predicted impact levels are not considered to prevent the species from being maintained, or restored to a sustainable level. This is due to a low level of impact predicted and the healthy status of the population.
Atlantic salmon	76 (fish)		17		17		17,616	0.1%	2%	Recent cases (Byelaws/NLOs for England and Wales) have concluded there is currently no exploitable stock of salmon within the Severn Estuary. This is a relatively low predicted impact but when stocks are at such low levels even relatively small numbers of fish are crucial to recovering stocks. The predicted impact could prevent the species from being maintained, or restored to favourable conservation status or a sustainable level.

Sea trout	8 (fish)		8		8		8,750	0.1%	0.4%	Predicted impact currently not considered to be at a level that would prevent the population being maintained or restored at a population level
Individual River Assessments - Annex II species										
Twaite shad - River Wye	763 (fish)		117		117		43,348	0.3%	2%	The twaite shad has experienced a population decline over the last 40 years. Against this background of declining populations, with the feature currently in unfavourable condition, it is considered that these predicted losses could prevent the species from being maintained at, or restored to favourable conservation status or a sustainable level within both these rivers. The modelled losses at HPC are likely to put further pressure on this small and declining population, while also preventing population recovery. The predicted impact, coupled with the small population size, could prevent the population from being maintained at, or restored to, favourable conservation status or a sustainable level! Recent cases (Byelaws/NLOs for England and Wales) have concluded there is currently no exploitable stock of salmon within the Severn Estuary. This is a relatively low predicted impact but when stocks are at such low levels even relatively small numbers of fish are crucial to recovering stocks. The predicted impact could prevent the population from being maintained, or restored to favourable conservation status or a sustainable level within both these rivers.
Twaite shad - River Usk	763 (fish)		117		117		21,674	0.5%	4%	
Allis shad - River Wye	23 (fish)		9		9		433	2%	20%	
Atlantic salmon - River Wye	76 (fish)		17		17		5,890	0.3%	4%	
Atlantic salmon - River Usk	76 (fish)		17		17		6,269	0.3%	5%	
NB lamprey species population considered at estuary level therefore no separate quantitative results for individual rivers, however they will be consider as Annex II species for River Wye and Usk within the HRA										