Slide 1	▪ Work for Freshwater Habitats Trust alongside Naomi Ewald and Angela Peters ▪ Also Ian Barker as part of our role as co-hosts of the Catchment Partnership ▪ Going to highlight some of the work Freshwater Habitats Trust and the Catchment Partnership are doing to address pressures on the water environment across the NF
Slide 2	▪ What is the New Forest catchment? ▪ NF catchment is defined by the coloured areas on the map ▪ Which includes Bartley Water, Lymington, Beaulieu, Darkwater, Hatchet and Sowley stream to name but a few ▪ The streams and rivers within this areas flow towards the Southampton water to the east or the Solent to the south. ▪ The area has two notable lakes – Hatchet and Sowley Pond ▪ extensive valley mire systems ▪ and over a thousand ponds and many more trackway pools and winter wet habitats in between ▪ The area is defined by EA catchment boundaries ▪ The National Park extends beyond to the west and the north ▪ And as a CP we seek opportunities to work with partners covering the Forest Fringe including the Hampshire Avon, the Cadnam and the Black water and the wetland features in-between. ▪ This entire area (essentially within and around the NP boundary) makes up the NF freshwater network ▪
Slide 3	▪ Water Quality plays an important role in freshwater and coastal biodiversity ▪ If you have heard, Naomi or I talk before you will know the New Forest is one of the most important freshwater landscapes in the UK and supports an exceptional array of wetland habitats and species ▪ This is because; unlike elsewhere the NF still has clean water habitats free from pollution. ▪ And many species are completely reliant upon traditional grazing and the depressions made by free roaming livestock ▪ These in combination, provide the perfect conditions for thriving biodiversity and rare species, now lost from many other landscapes across the country.

Slide 4	▪ However all is not a bed of roses
	▪ In recent years changes in water quality have been detected across the Forest as with much of the UK
	▪ Under the Water Framework Directive (which is the EA's framework for monitoring the quality of England's rivers and lakes) most water bodies within the catchment are failing to meet even the minimum status.
	▪ These declines are associated with 4 main contributors:
	  ○ Discharge form wastewater treatment from water companies and private sources
	  ○ Intensive agriculture
	  ○ Urban and road run off
	  ○ And heavy recreation pressure
	▪ Some activities and operations can introduce damaging levels of nutrients in a single event
	▪ But much of the time, individually, many inputs may have small tolerable effects in a typical lowland landscape.

	▪ However, the high status landscape of the Forest, means that collectively, small inputs accumulate and result in major changes in WQ resulting in loss of species and risk to human health. ▪ Most of England's rivers are highly polluted, to many nutrients, heavy metals, pesticide etc ▪ No wonder the extinction rates for freshwater species are 4 to 6 times higher than terrestrial counter parts.

Slide 5	▪ Our role is to protect, improve and expand the unique habitats of the New Forest freshwater landscape from source to sea.
	▪ Through the CP our work involves engaging with others to identify risks and investigate ways of reducing pressures from the environment.
	▪ We do this by:
	  ○ Undertaking catchment walkovers (which is a type of freshwater survey) and includes WQ testing and land use mapping to help understand areas of risk
	  ○ Use existing data from statutory monitoring such as EA WFD data and NE Common Standards Monitoring
	  ○ Most importantly listen to the concerns and challenges of landowners, businesses and communities who are a seeking advice to consider how their activities could be part of a package of works to reduce, reuse and recycle water.
	▪ The next few slide provide you with an insight into our work and the role we play in ensuring nature recovery is at the top of everyone's agenda.

Slide 6	▪ Little did we know, the New forest has a wealth of soft fruit and plant nurseries providing jobs and supplying local produce to local outlets and much wider and further afield.
	▪ Through walkover surveys and discussions with industry, opportunities were identified to improve how these businesses managed water on site.
	▪ Funding came through the Env Agencies WEIF, which levered significant investment from the nursey businesses themselves.
	▪ In total we engaged with 5 businesses across 3 catchment, focusing on high priority areas either failing or at risk including, Beaulieu River and estuary, Sowley Pond and Lymington River
	▪ As these producers fall through any agri-env type funding scheme, the project was set up to support this industry, to address nutrient and sediment run off from hard standing surfaces.
	▪ This work included
	  ○ Raising awareness of the high status freshwater and coastal landscape
	  ○ Providing expert advice on water resource management
	  ○ Contributing funding for capital works

Slide 7	▪ These businesses are now harvesting more than just fruits! ▪ Across 4 sites we have: ○ **Funded rainwater harvesting systems** connected to existing irrigation operations where huge water tanks have been installed and fitting with a **pressure valve** (clever in design) to ensure rainwater is always prioritised over mains supply. ▪ We have trialled other options too

	○ **Installation of leaky dams** – structures with channel slowing the flow to allow nutrients and sediments to drop out preventing them from entering protected sites. ○ And we have commissioned a feasibility study for a complete water recycling system which one site is keen to take forward. ▪ Little factoid – Across the four sites water storage capacity has increased by 470%. ▪ By utilising rainwater, many benefits are to be had. Not only is there a reduction in nutrient and sediment run off, but the clever design decreased demands on mains supply channelling clean water into a useful resource, which ultimately is good for nature, climate and business. ▪ One owner has even reported that local flooding issues have disappeared since installing the system.
Slide 8	▪ As discussed a large proportion of rivers in the NF fail to meet at least good ecological status under the Water Framework Directive assessment. ▪ The Bartley water and Fletchwood trib are no exception and are classified at moderate status – partly due to phosphate pollution from waste water discharge and rural land management. ▪ Like many New Forest streams and rivers, they are bordered by landowners who have small-scale operation, too small to be high priority under regulatory agencies and where most agri environment funding in not economically viable. ▪ walkover surveys and landowner engagement has enabled NFLAS to identify opportunities to make improvements to land use practices. ▪ The project has targeted defined geographical areas working with communities of landowners to help alleviate pressures to the water environment. ▪ This project has been funded through EA's WEIF and landowner cash contributions. This has enabled NFLAS to engage with 22 landowners across this catchment with a focus on the Fletchwood and Minstead area.
Slide 9	▪ Engaging landowners within the land use sector has been key to kick starting an enthusiasm for the water environment ▪ Small amounts of funding coupled with careful advice – aiming for best practice in this high status landscape - has seen a real commitment towards change, understanding issues, and working together to find solutions. ▪ In fact, many landowners have gone above and beyond the minimum requirement and are investing more time and more money into further solutions to better their business and practices for nature and climate. ▪ Here are a couple of examples of some of the investments being made: ○ More rainwater capture – this has been plumbed in to provide drinking water for cattle, which they prefer over mains supply! ○ Fencing to protect the water course from livestock ○ Temporary matting to enable movement of manure across a wet field from a previous location close to the ditch now away from the ditch ○ Installation of an underground tank to collect farm yard run off – separating clean water from dirty water.

	○ Changes to cattle management to better deal with manure, this is a conversion to a deep litter system from an outdoor loafing and feeding area. ○ This project has removed 100's of tons of manure attributed to livestock and recreational horse keeping ○ Installation of a covered manure store to capture clean water diverting to stream to prevent nutrient and sediment rich run off from the yard.
Slide 12	▪ Wilder for Water is a project to address camping and recreational pressures on the water environment across the NP ▪ Over the years discussions with landowners, partner organisations and local businesses coupled with catchment walkovers has seen a pattern begin to emerge ○ Landowners who come to us for advise on land management and pollution issues have begun to consider that their campsites or recreation facility could be part of a package of works to reduce, reuse and recycle water ○ We've seen Visitors make a beeline for water, Hatchet, Balmer Lawn being classic examples and visitors do not know why some activities are bad news for water and wetland wildlife ○ Through the walkover surveys, water quality tests have detected nutrient pollution downstream of campsites and in ditches around car parks popular with day visiting motor home users. ○ Rangers who are experiencing problems out on the ground have requested more information to help target key messages to visitors. ▪ The NF is the second smallest national park with the highest proportion of designated land for nature conservation than any other in England. ▪ We know that the Forest is a popular staycation with increasing popularity esp during the pandemic ▪ Camping is well catered for with more than 90 sites totalling 6000 pitch spaces per day –that's more than 3 times the average than any other NP ▪ And whilst providing a significant boost to the local economy it's important as a partnership we ensure visitors don't inadvertently damage the very thing that attracts them here in the first place.
Slide 13	▪ Our aim through wilder for water is to raise awareness and champion a best practice clean water standard for camping and recreation across the National Park. ▪ Through funding from the Green Recovery Challenge fund and the EA's WEIF our targets include: ○ Engaging with key visitor audiences including ▪ Visitors staying at campsites ▪ Day visitors with motorhomes ▪ Unpermitted overnight parking and wild camping ▪ Water sports users ▪ Youth access part of organised groups and site facilities ▪ General visitor

	○ Provide resources to help others engage and promote key messages. An example of this would be through outdoor learning and recreation venues, Calshot, Tile Barn, and places like the New Forest water park. ○ Engaging with landowners and campsite businesses providing free and impartial advise on water resource and water quality management. Helping to navigate through regulation but also to aim towards a gold standard appropriate to a high quality landscape ○ To do this we need to fund raise for solutions which will reduce the greatest pressures ○ We aspire to build a network of freshwater champions through our volunteer teams, landowners, businesses and partner organisations.
Slide 14	▪ We have seen first-hand that landowners, businesses and communities across the Forest are committed to change, working together to reduce their environmental footprint ▪ Our focus has been reducing and removing nutrients and sediments in line with environmental policies and targets for the water environment ▪ However there is uncertainty around the actual biological impact this is having ▪ More detailed monitoring is required to track changes ▪ Reducing pressures on the environment is only a part of the solution towards nature recovery ▪ Creating abundant clean water habitats is the next step to expanding the freshwater network ▪ The New Forest being a high quality landscape at the core is a major factor in helping any intervention maximise its potential.