Forestry Commission England

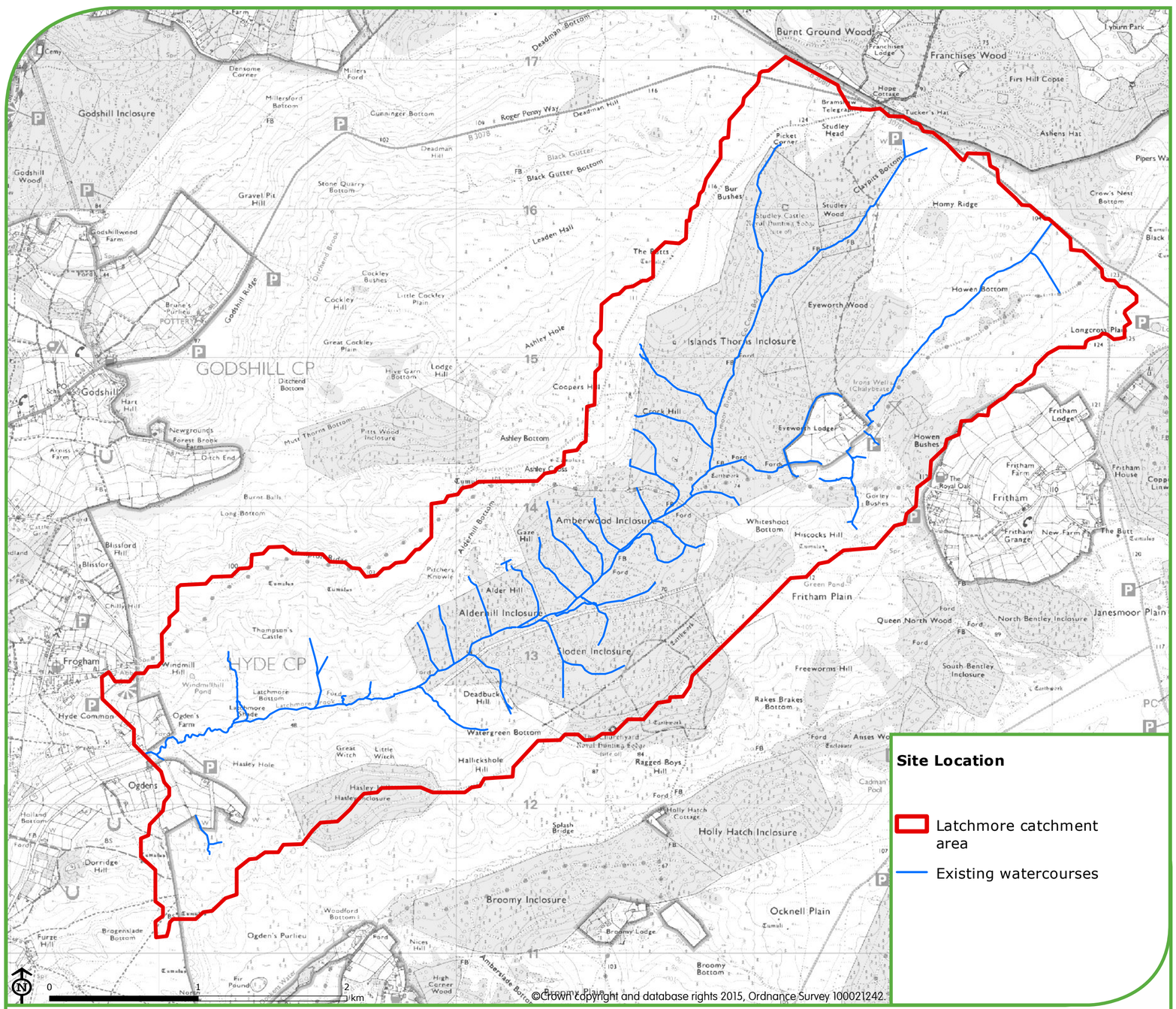
Latchmore Wetland Restoration Project

Welcome

Welcome and thank you for taking the time to come to this exhibition about the **Forestry Commission's Wetland Restoration project at Latchmore.**

The Forestry Commission will be submitting a Planning Application accompanied by an Environmental Statement (ES) for the Latchmore project to the New Forest National Park Authority in November 2015.

The exhibition provides information on the project and the findings of the Environmental Impact Assessment.



Site Location

Latchmore Brook flows through the New Forest National Park and is a tributary of the River Avon. It rises in Picket Corner and Crowís Nest Bottom, draining west towards Ogdens (south of Frogham) where it becomes known as the Huckles Brook. Latchmore Brook extends through three forest Inclosures before entering the Open Forest: Islands Thorns Inclosure; Amberwood Inclosure ; and Alderhill Inclosure. Drains within Sloden Inclosure also flow into the Brook. The catchment includes semi-natural broadleaved woodland, planted conifers and broadleaves, mire, dry acid heath, wet heath and grassland habitat. The main land uses are forestry, grazing and informal recreation (e.g walking, horse-riding).

Designations

The restoration project lies within the New Forest National Park; one of the most intact networks of wetland habitats in Western Europe. The whole site also falls within the New Forest Site of Special Scientific Interest (SSSI), as well as a Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar Site (all European Nature Conservation Designations).

Need for the Project

The brook was artificially deepened and widened in the mid-19th century and early 20th century and the steeper channel slope has resulted in the brook flowing faster. Over time this has led to increased erosion and has meant that the brook has become more disconnected from the floodplain. This in turn is adversely affecting the ecology of the catchment as important wetland habitats are drying out. The wetland restoration works are seeking to restore the brook to its natural, meandering state, reduce erosion of the stream banks and bed and prevent the drying out of the surrounding ground.

The Forestry Commission has a legal responsibility under the EU Habitats Directive/Wildlife and Countryside Act 1981 to restore and maintain Special Area of Conservation (SAC) and SSSI where the habitat has been assessed by Natural England as being in an 'unfavourable condition'. The restoration works are therefore being proposed to restore the SSSI units within the Latchmore catchment back into 'favourable condition'.

Detailed maps illustrating the restorations work proposals can be viewed on tables here at the Public Exhibition.

The Proposed Works

The restoration project will involve eight main types of work as set out in the table below:

	Proposed work	Why is it needed?
1	Excavation and recreation of the old brook meanders	To reduce flow rates and erosion in the brook (by increasing the length of the channel and therefore reducing the gradient) To restore channel stability To improve connectivity with the floodplain
2	Bed level raising of main channel, tributaries and side drains	To reduce flow rates and erosion To improve connectivity with the floodplain
3	Drain infill of existing main channel, tributaries and side drains	To divert the water into the restored meanders
4	Repair of knick points (key erosion points)	To prevent further headward erosion of the brook and supported habitats To restore and stabilise water levels
5	Removal of spoil banks	To enable the brook to overtop its banks more frequently and restore connectivity with the floodplain To reduce flow rates and erosion
6	Tree felling, scrub and vegetation clearance	To provide access to undertake the works
7	Placement of large wood such as old tree stumps across channel (but only in SSSI Unit 66 Alderhill Inclosure)	To reduce flow rates To reduce erosion To increase in-stream channel diversity
8	Replacement, maintenance or relocation of 16 access structures (fords, culverts and bridges)	To maintain or restore access

Timescale for Works

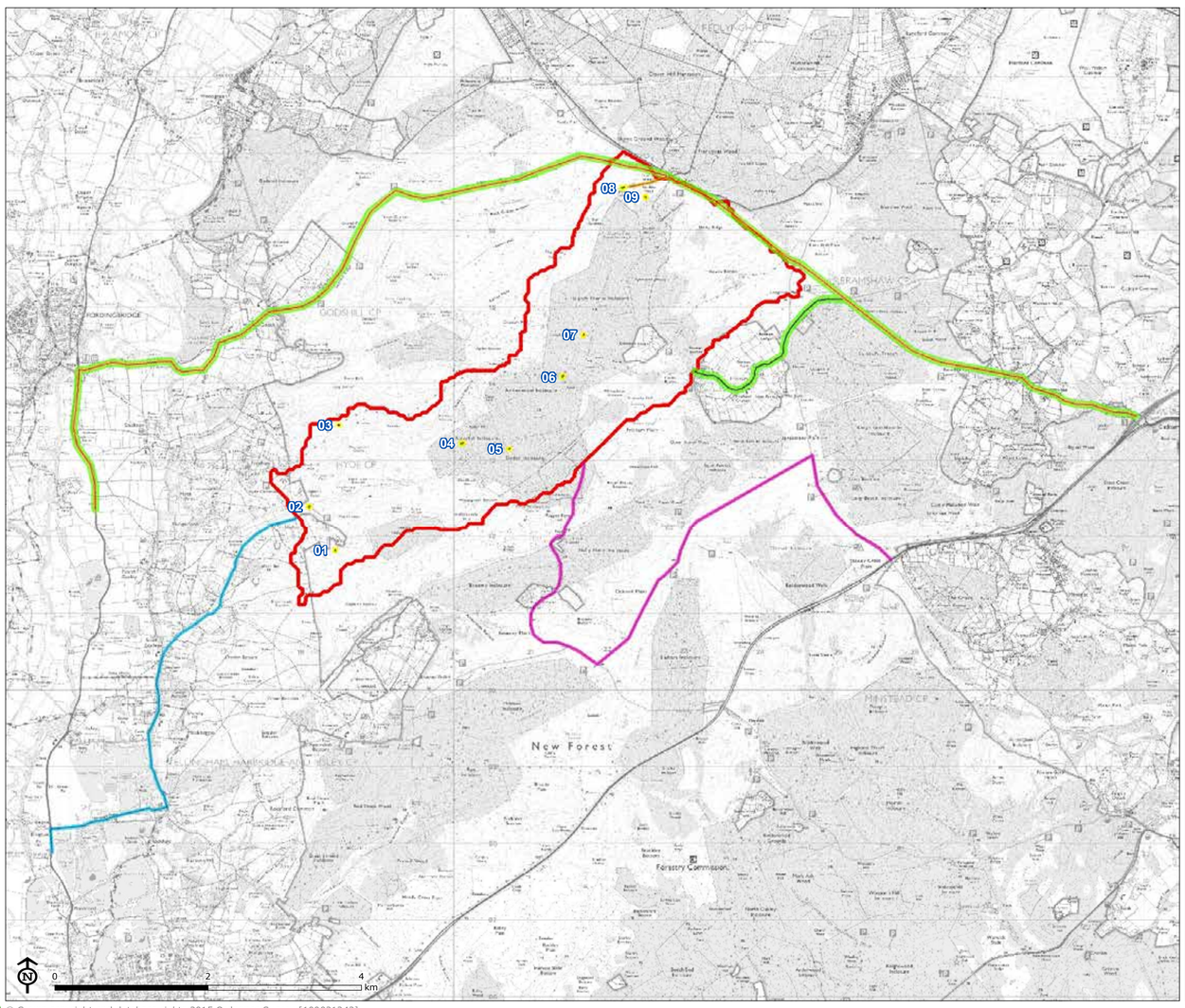
The restoration works will be undertaken in short stages (of up to 6 weeks) in the summer months over a four year period (2016 - 2019).

Year	Months	Site
2016	August-September	Islands Thorns (Picket Corner to Fritham Bridge)
	September	Thompsons Castle
	September	Latchmore Mire
2017	August-September	Studley Wood
	Mid-August - September	Ogdens Mire
2018	July-August	Amberwood and Alderhill Inclosures
	August-September	Sloden
2019	Mid-August - September	Watergreen Bottom
	Mid-August - September	Latchmore Shade

Material Delivery Routes

Material for the restoration works, including hoggin, washed gravels, clay and heather bales, will be transported to nine stockpile locations within the Latchmore Catchment by four routes from the main roads in the area.

Material Delivery Routes



Project: Latchmore Wetland Restoration

Figure 4.13: Material Delivery Routes

Latchmore catchment area
Stockpile area
01: Ogdens Mire
02: Ogdens Car Park
03: Hampton Ridge
04: Alderhill Inclosure
05: Sloden Inclosure
06: Fritham Bridge
07: Islands Thorns
08: Picket Corner
09: Claypits
Material delivery routes
Alderhill
Ogdens
Telegraph Hill
Fritham

LUC

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Source: Forestry Commission, LUC, OS

Transport Route	Description of Route
Ogdens	Along the A338, turning at Ellingham Drove, left at Moyles Court, north along Gorley Road to South Gorley, and right to Ogdens.
Alderhill	A31 Stoney Cross, via Forestry Commission roads over Broomy Plain and Broomy Inclosure.
Fritham	Either: Along the A31, taking the B3079 and then the B3078, left at Longcross, right towards Fritham, through Fritham village, past the Royal Oak Public House, and left into the forest car park with track to Islands Thorns Inclosure; or along the A338, joining the B3078, right at Longcross, right towards Fritham, through Fritham village, past the Royal Oak Public House, and left into the forest car park with track to Islands Thorns Inclosure.
Telegraph Hill	Either: Along the A31, taking the B3079 and then the B3078, turning left at Telegraph Hill; or along the A338, joining the B3078, turning right at Telegraph Hill.

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Latchmore Wetland Restoration Project

Options Considered

The EIA Regulations require the Environmental Statement to include an outline of the main alternative options considered and the main reasons for the choice made, taking into account the environmental effects. Four alternative options for the Latchmore Wetland Restoration Project were considered including Option 1 which was to undertake no restoration works.

Option 1 was not considered a viable option, because of the statutory requirement to bring the habitats into favourable condition.

Proposed work		Option 2:	Option 3:	Option 4:
1	Meander Restoration	✓ No meander restoration in SSSI Unit 48	✓	✓ No meander restoration in SSSI Unit 48
2	Bed level raising of main channel, tributaries and side drains	✓	✓	✓
3	Infill of the existing main channel, tributaries or side drains	✓	✓	✓
4	Repair of knick points (key erosion points)	✓	✓	✓
5	Removal of spoil banks	✓	✓	✓
6	Tree felling, scrub and vegetation clearance	✓	✓	✓
7	Debris dams installation Inclosure	✓ (but only in SSSI unit 66)	✓ (but only in SSSI unit 66)	✓ (in SSSI unit 66 and 48)
8	Replacement, maintenance or relocation of access structures.	✓	✓	✓

The table provides a summary of the main elements of work associated with Options 2, 3 and 4.

Proposed Options

Option 2:

Undertake works in the upper catchment but no works within Latchmore Shade (SSSI Unit 48)

Option 3:

Undertake works in all SSSI units with re-creation of old brook meanders in Latchmore Shade (SSSI Unit 48)

Option 4:

Undertake works in all SSSI units with use of natural debris dams/ channel blockages in Latchmore Shade (SSSI Unit 48)

Conclusions of Options Analysis

Option 3 was chosen for the following key reasons:

- EIA concludes there is a need to undertake works across the whole of the whole catchment (as opposed to Option 2) to maximise opportunities to reduce flows and erosion and restore channel stability to more natural regime.
- Option 3 provides the best solution for reducing erosion at Thompson Castle/Latchmore Brook confluence (compared with Option 4 - the use of debris dams/channel blockages)
- Securing the use of debris dams in the open forest - i.e. Unit 48 (Latchmore Shade) would not be possible as Verderers consent would not be forthcoming. They have concerns about the horses/cattle getting stuck in debris dams in the open forest. Option 4 was therefore not considered viable.

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Environmental Impact Assessment

The planning application for the project will be accompanied by an Environmental Statement (ES). The ES has been prepared in accordance with the Town and Country Planning (Environmental Impact Assessment (EIA) Regulations (2011).

The ES evaluates and presents the potential significant environmental effects (positive or negative) resulting of the proposed project to assist the planning authority (in this case the New Forest National Park Authority), statutory consultees (such as Natural England and the Environment Agency) and the wider public when considering an application.

This was undertaken by establishing the existing characteristics of the area likely to be affected by the development, known as the 'baseline', and then assessing the potential environmental effects of the project, noting whether they are positive or negative. Where effects have been identified, the EIA sought to minimise or avoid these (where possible) by amending the proposed scheme.

EIA Team

The EIA was undertaken by LUC, an independent planning and environmental consultancy , in accordance with the Institute of Environmental Management and Assessment (IEMA) Code of Practice.

LUC was supported by a wider team of specialist sub-consultants including ecologists, ornithologists, hydrologists, transport engineers and archaeologists.

The wider team included:

- Cascade Consulting Ltd (Hydrology, River Habitat Survey (RHS), Otter, Macroinvertebrates).
- Hampshire and Isle of Wight Wildlife Trust (Odonata).
- Turnpenny Horsfield Associates (Fish).
- Footprint Ecology (Breeding and overwintering birds).
- RPS Group (Bats).
- Oxford Archaeology (Archaeology).
- Transport Planning Associates (Transport).
- Hoare Lea Acoustics (Vibration).

LUC
Environmental Planning Design & Management

iema EIA

footprint ECOLOGY

oxfordarchaeology southsouthsouth

CASCADE

tpa Transport Planning Associates

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EIA Surveys

The following surveys were undertaken for each topic area:

Water environment
potential impacts on the hydrology of the river and flood risk.

Ecology
potential impacts of plants and animals.

Traffic, access and vibration
potential impacts on traffic flows on local roads and vibration from works vehicles on cobb cottages.

Landscape and visual
potential impacts on the landscape and key views within the Latchmore Catchment.

Recreation
potential impacts on recreational users e.g. horse riders, walkers, cyclists.

Archaeology
potential impacts on below ground archaeological remains.

Topic Area	EIA Surveys
Water environment	• Hydrology • Flood Risk • Water quality • Geomorphology and sediments
Ecology (plants and animals)	• Vegetation • River habitat survey • Fish • Macroinvertebrates • Birds • Southern damselfly • Reptiles • Great Crested Newts • Otter • Bats • Badgers
Traffic	• Vehicle access routes and access points • Traffic generation • Vibration assessment (cobb cottages)
Landscape and visual	• Landscape character • Views and visual amenity as experienced by people
Recreation	• Recreational use ñ i.e. by horse riders, walkers and cyclists.
Archaeology	• Designated and undesignated heritage assets • Potential archaeological sites




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Latchmore Wetland Restoration Project

EIA Findings

Ecology - (plants and animals)

The EIA assessed the potential for the proposed restoration works to affect plants and animals. The key findings of surveys are summarised in the table below.

Ecological Feature	EIA survey Findings
Habitats	The habitats surveys found that the Latchmore catchment does support important vegetation including four of the New Forest's qualifying, Annex I habitats (including wet and dry heath).
Fish	A total of ten species of fish were found including three species of conservation importance (Brown/sea trout, bullhead and European eel).
Macroinvetebrates	The macro-invertebrate community found was characteristic of a low pH oligotrophic (low nutrient) stream. No macroinvetebrates were found with a conservation designation.
Birds	During the 2014 surveys, 55 bird species where recorded and in 2015, 64 species. This included three species (Dartford warbler, woodlark and wood warbler) that are interest features of the New Forest Special Protection Area.
Southern Damselfly	Part of the Latchmore catchment supports a strong population of southern damselfly and is considered to be an important site for this species in the New Forest.
Reptiles	The heathland habitats present in the catchment were found to be suitable for smooth snake, slow worm, grass snake, common lizard and adder.
Otter	The habitats within the Latchmore catchment provide some suitability for otter however, only limited otter evidence was recorded along the Latchmore Brook.

Surveys for badgers and great crested newts were also undertaken but these animals were not found so they were scoped out the EIA. Bats surveys are still ongoing.

During the restoration works there will be some short term significant effects (at the site level only) due to disturbance and potential loss on southern damselfly, macro-invertebrates and reptiles.

Post restoration there will be significant positive effects at local or site level on habitats, southern damselfly, macro-invertebrates, fish, birds, bats and otter. This will be due to the improvements in the river and terrestrial habitats.

EIA Findings

Water environment

The EIA assessed the effects of the proposed work during restoration on:

- Water quality issues due to potential pollution and increased suspended sediment.
- Short term changes in flood risk.
- Impacts on abstraction from, and discharges to, Latchmore Brook and downstream watercourses.

Post Restoration the EIA assessed:

- Long term changes to the volume and speed of water within the brook flow.
- Changes to flood risk.
- Changes to rate at which erosion occurs due to changes in the channel shape.
- Changes to groundwater levels.
- Impacts on abstractions from, and discharges to, Latchmore Brook and downstream watercourses.

During the restoration works there is the potential for significant effects on water quality due to the works being undertaken in the main channel, tributaries and drains. However, with the adoption of Environment Agency Pollution Prevention Guidelines and the implementation of a good practice monitoring and action plan, it is anticipated that the effects will be negligible. There will be no increase in flood risk to properties downstream and no impacts on abstractions and discharges.

Post restoration there will be significant long term benefits in relation to improvements to the hydrological and geomorphological regime. It is difficult to predict the extent of any such benefits and a monitoring and action plan will be implemented. There will be minor beneficial effects arising from a reduction in the volume and speed of water within the brook, reduced erosion rates, an increase in ground water levels and reduced flood risk. There will be no impacts on abstractions from, and discharges to, Latchmore Brook and downstream watercourses.

Landscape

The EIA assesses the potential effects of proposed development on:

- the landscape;
- views and visual amenity as experienced by people.

The open landscape centred on Latchmore Brook is the most sensitive part of the Study Area in terms of scenic beauty, distinctive character, visibility and recreational value. The brook itself is also the focal landscape feature in the area. The landscape and recreational users are therefore considered to be highly sensitivity to change.

During the restoration works there will be disturbance resulting from construction activity, vehicular movements and stockpiling of materials. Within Latchmore Shade, the open character of this area means that the restoration works will be particularly visible. However the works will only take place over a 6 week period each year and any vegetation cleared to facilitate access will re-establish. The effects on the landscape will therefore be short term.

Post restoration there will be some changes to the landscape features as result of the meander restoration, bed level raising and infill, knick point repair, spoil bank removal and access structure alterations. However these changes will not fundamentally affect the character of the landscape or have a negative impact on views within any of the affected areas.

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EIA Findings

Recreation

The EIA assessed the potential effects of the proposed work during and post restoration on recreation users.

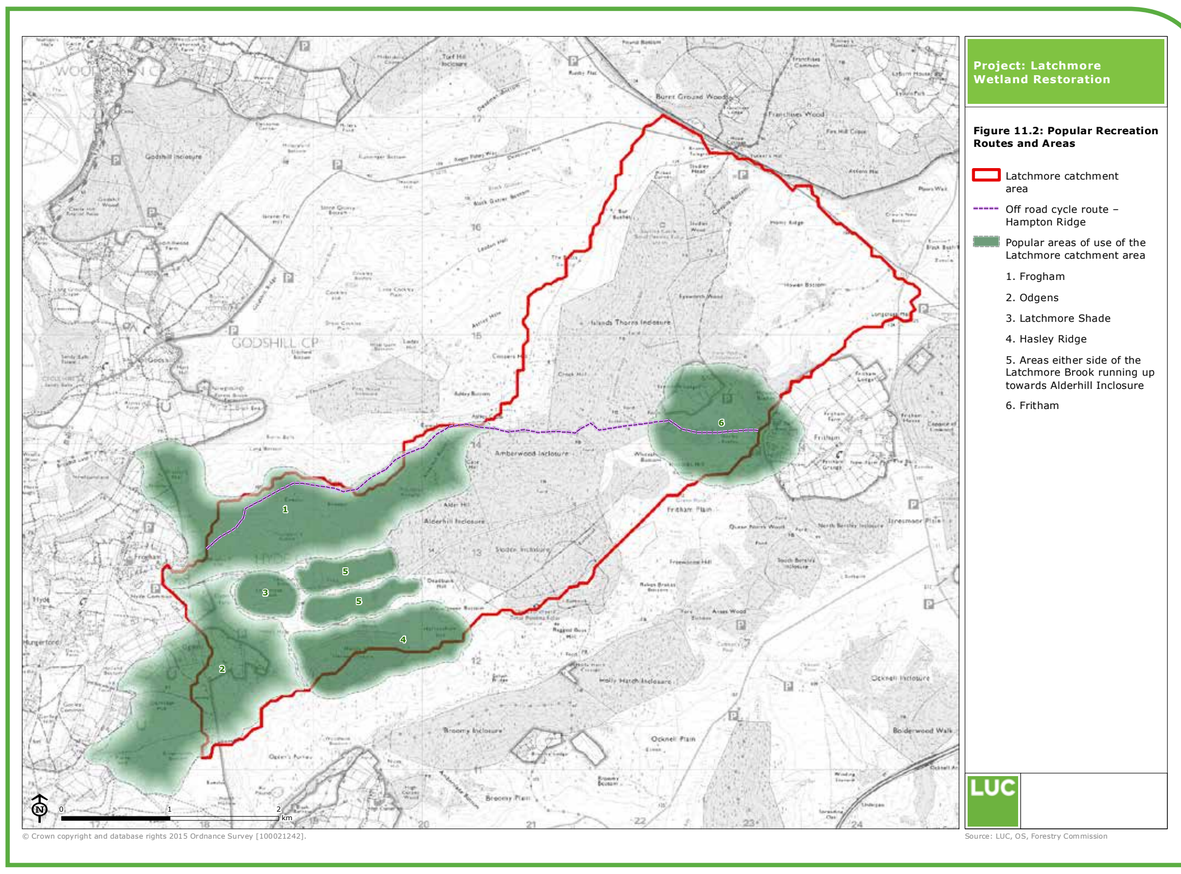
Desk study research, a survey of recreational users and discussions with relevant user groups and the FC rangers found that:

- The Latchmore catchment area is frequently used for recreational activities, particularly walking (including dog walking), horse riding, cycling and bird watching.
- The off road cycle route Hampton Ridge, between Frogham and Fritham is well used.
- The most popular areas of use within the Latchmore catchment are to the west, southwest, and east (around Fritham) - see Map. The Inclosures are used less frequently.
- The most popular car parks used are Abbots Well and Ogdens car parks, located to the southwest.

During the restoration works public will still be able to undertake all existing recreational activities such as walking, cycling, horse-riding etc. There will however be some temporary disruption including:

- Temporary closure of Ogdens Car Park in the summers of 2016, 2017 and 2019. Access to other nearby car parks (e.g. Abbots Well Car Park) will be maintained during these periods.
- Movement of works vehicles through the catchment on defined access routes.
- Restricted access (for reasons of health and safety) to the areas where the restoration works are taking place.

Post restoration there will be improvements to the access structures (fords and bridges) within the inclosures.



Archaeology

The EIA assesses the potential effects of the restoration scheme on:

- Designated and undesignated archaeological sites.
- Areas of archaeological sensitivity.

There are eight Scheduled Monuments within the Latchmore cathment and a number of undesignated archaeological remains. Sites/ finds of archaeological interest include: the remains of the Studley Castle Royal Hunting Lodge; pre-inclosure banks; barrows; spreads of burnt flint; scheduled Roman pottery kilns; holloways (sunken lanes); areas of clay extraction pits; medieval banks and trackways; and a Bronze Age bowl barrow (burial mound).

During the restoration works any sites of archaeological interest that have the potential to be affected by the proposed works will be clearly marked out to avoid damage to any remains. Some works within the channels of the brook have the potential to affect roman and post-medieval finds. When works are being undertaken in these areas, they will be closely monitored by an archaeologist to record any remains found.

Post restoration there will be no effects on sites of archaeological interest.

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Latchmore Wetland Restoration Project

EIA Findings

Traffic, access and vibration

The EIA assessed the following effects:

- Increase in traffic generation and effect on road capacity.
- Effect on road safety.
- Loss of pedestrian amenity (the 'relative pleasantness walking along the roads by foot)'
- Potential for vibration damage to cobb cottages.

During the restoration works there will be a maximum of between 50-80 HGV and up to 16 tractor/trailer movements a day along the selected access routes (These access routes are shown on Public Exhibition Board 3). This will result in a significant increase in traffic generation along these roads, albeit for only a 6 week period within each year the works are undertaken.

A review of accident records from Hampshire Constabulary suggest that there are no highway safety problems with proposed access routes. There may be an impact on pedestrian amenity, particularly along the Ogdens and Fritham routes given their proximity to residential areas and use as walking routes within the New Forest.

A vibration assessment found that the levels of vibration from restoration works traffic (tipper lorries, and tractors and trailers) may be perceptible by residents but they will not cause building damage, even for buildings of cob construction.

Prior to any works commencing a Construction Traffic Management Plan (CTMP) will be agreed with the New Forest National Park Authority and Highways Authority. The plan will aim to minimise the impact of the HGV deliveries through temporary signage; delivery times restrictions; speed restrictions; wheel washing facilities; road condition surveys and remedial works.

Post restoration there will be no effects on traffic.

Next Steps

Thank you for coming to the exhibition today.

Notable Dates include:

November 2015:

Submission of Planning Application and Environmental Statement to the New Forest National Park Authority.

February/ March 2016:

Deadline for determination of the applications by the New Forest National Park Authority (16 weeks after the submission date).

We will continue to update the local community as the application progresses via the project website:

http://www.hlsnewforest.org.uk

A copy of these public exhibitions boards is also available on this website.

Please fill in a comment card: we are keen to hear your views and thoughts on the proposed application.

New Forest Wetland Restoration Review

The Forestry Commission, together with various partner organisations, have been progressing Wetland Restoration Projects in the New Forest since 1997. It is estimated that nearly 150 wetland sites have been restored. Over the years various techniques to restore the New Forest Wetlands have been developed, refined or modified based on the experience gained and levels of success.

The River Restoration Centre and Jonathan Cox Associates were commissioned by LUC on behalf of the Forestry Commission to independently review a sample of past wetland restoration projects to determine whether the projects have met their objectives. Eight sites were selected for detailed review.

The Study concludes:

"All of the sites assessed have shown sustained positive change over the period since their restoration both in terms of improving the quality of habitats and restoring the physical functioning of the mire/river systems. Some of the restoration techniques used to restore earlier sites have been changed or adapted since to inform and improve best practice. There are no examples where techniques which have been found to have failed or be inappropriate have continued to be applied without revision, adaptation or a new approach being adopted."

The study also recommends that a formal systematic monitoring programme is established to evaluate change and learning across the Forest-wide restoration works.

Example: Fletchers Thorns Wetland Restoration

The restoration at Fletchers Thorns was undertaken in 2011-2013 and involved the restoration of a stretch of approximately 1.3km of river. Prior to the restoration this SSSI unit was in unfavourable declining condition due to the effects of the artificial straight drainage channel, which caused increased erosion of the river bed and limited channel habitat diversity. The aim of the restoration was to re-establish a more natural riverine system and improve the SSSI to a favourable condition. To achieve this, the straight artificial drain was infilled and flow diverted back through the river's old meandering course.


Before (spring 2011)


After (autumn 2014)


During construction (summer 2011)


After (autumn 2014)


Drainage channel - before (spring 2011)


After (autumn 2014)

Review Conclusions

"The river restoration at Fletchers Thorns has naturalised and achieved significant nature conservation and ecosystem service benefits in a very short period of time. The restored meandering channel of the Blackwater through Fletchers Thorns has restored connection between the river and its floodplain. The flora and vegetation of the area is still responding to these changes but is likely to be substantially improved. The old channel is re-vegetating well and can only be recognised by the discerning eye."

A copy of the Wetland Restoration Review and be downloaded from the HLS website:
www.hlsnewforest.org.uk/hls/info/50/wetland_restoration