



Environment Agency

Emsworth – Nore Farm Stream Flood Alleviation Scheme

Planning Application

Design Access Statement & Local Requirements

Date: 30th March 2014

Version 3.0

Application to Havant Borough Council for the installation of a Flood Alleviation Scheme and wetland habitat to the North of A27 Emsworth.

Introduction & Purpose:

This Design and Access statement has been prepared by the Environment Agency. It supports a planning application for a flood alleviation scheme to help protect people and property from flooding from the Nore Farm Stream located in Emsworth (grid reference: SU7406).

This document outlines:

- a) The design principles and concepts that have been applied to the production of the proposed flood alleviation and;
- b) How issues relating to access have been addressed.

This design access statement should be read in conjunction with the planning application, relevant drawings and local requirement documents as included.

Background and Physical Context:

The Nore Farm Stream drains the Western area of Emsworth. It is a small heavily modified water body which reacts quickly to surface water runoff. Nore Farm Stream is designated as Main River south of the A27. The Nore Farm Stream is culverted under the A27 and the railway and rises again north of Selangor Avenue. The stream is culverted again to emerge in agricultural land. It then flows through woodland and enters Chichester Harbour.

Flooding from the Nore Farm Stream occurs regularly. The most recently in December 2013 and there have been previous events in June and December 2012. Flood events have also been recorded in 1989, 1995, 2000 and 2008 and 2010. The most frequent flooding on the Nore Farm Stream has occurred in the proximity of the Selangor Avenue culvert. The properties in Selangor Avenue in the vicinity of the culverts lie within a depression. Here the raised crest of Selangor Avenue causes flood water to pond. In higher order events, once the crest of the road in Selangor Avenue has been exceeded, out of bank flow continues down Nore Farm Avenue towards the A259.

In total there are currently 51 properties at risk of flooding some properties have a standard of protection of no greater than 20% annual exceedance probability (or a 1 in 5 chance of flooding in any year).

An example of the impact of recent flooding events to the local community is illustrated in the following photographs:



The proposed action to reduce flooding is to create a Flood Water Storage Area, by construction of a series of water storage ponds. These storage ponds will provide attenuation of flood water, allowing slow discharge into the existing A27 culvert; thus mitigating the overflow currently experienced at this location, during periods of heavy rainfall. These measures will increase the standard of protection and reduce the risk of flooding from the current 1 in 5 to in excess of 1 in 100 (reduction from 20% to 1%). This standard of protection will eventually increase to 1.3% with the impact of climate change.

The Flood Water Storage area would be located within arable farmland immediately North of the railway line and the A27 as indicated on the location plan (Drawing NFS FAS Emsworth Location Plan 0001 included with this application) and in the following photograph.



Figure: Photograph taken in March 2012 detailing section of the arable farmland outlined in drawing NFS FAS Emsworth Location Plan 0001 as part of the proposed location of the flood storage area. The Photograph shows the view to the East.

The flood storage will be created through shallow excavations to create permanent water storage wetland ponds. The excavated land will be placed around the excavated areas to create landscaped bunds; this will reduce the requirement for off-site disposal of material and minimise the waste arising from the construction. Both the wetland ponds and the landscaped bunds will provide habitat for wildlife and provide ecological benefits in addition to their role in flood mitigation.

The Flood Storage Area will involve the construction of a control structure to restrict flows as the water leave the Flood Storage Area and enter the A27 culvert. The Storage Area outflow will be limited to not exceed the capacity of the culvert under Nore Farm Avenue to ensure no flooding to properties downstream.

The Nore Farm Stream works also include the construction of a new ditch to the north of the A27, east of the proposed Flood Storage Area. This ditch is designed to maximise the flow intercepted by the Storage Area and to avoid the possibility of A27 runoff entering the Flood Storage Area and bypassing existing pollution control facilities.

The Flood Storage Area will cover a total of 2 hectares. The drawings provided with this application demonstrate three alternative arrangements at this proposed location.

Social and Environmental Context:

In identifying the preferred solution for flood alleviation, optioneering has been undertaken which has given consideration to the various land uses within the proximity of the scheme. These land uses are mixed in nature and include local road and rail infrastructure, agricultural land classified to a mixture of Grade 2 & 3 and residential developments in the town of Emsworth to the South and Denvilles to the West. Consideration has been given to selection of a site and a solution which will minimise the impact on human beings, wildlife including flora and fauna, local infrastructure, land use, visual amenity and cultural heritage.

The proposed flood alleviation will create a small (2 hectare) reduction in arable farm land, but will have a low impact upon the local community; being remote from public access, having low visual and environmental impact, providing improved flood mitigation measures and ecological benefits through creation of habitat for wildlife.

The selection of a flood water storage solution at this location is considered to have minimal negative impact upon the wider key environmental constraints within the proximity of the site and will provide environmental enhancements. To ensure the environmental constraints were adequately considered an informal options workshop was undertaken to appraise the alternative options considered for the scheme. Following this, a scoping consultation exercise with internal and external stakeholders was carried out between October 2012 and February 2013.

The list of parties consulted were:

- Emsworth Flood Action Group 13th February 2012
- Brookfield Hotel, Emsworth 18th April 2012
- Natural England During options development April 10, 2012
- Highways Agency – Area 4 Agent During options development
- Highways Agency During options development
- Highways Agency/Area 4 Agent During options development 18th May 2012
- Network Rail During options development
- Network Rail During options development 17th October 2012
- Hampshire County Council Highways During options development
- Southern Gas Networks During options development
- Landowner (Southleigh Farm) Mr White During options development
- Landowner – NFS 4C (Mr Stride During options development
- Havant Borough Council Screening – Consultation on Scoping Consultation Document 16/11/2012
- Natural England Screening – Consultation on Scoping Consultation 3/12/2012

- English Heritage Screening – Consultation on Scoping Consultation 27/11/2012
- Havant Borough Council (Environmental Health)
- Comment from Environmental Health to Development Control on 2nd November 2012.

The consultation outlined above included statutory and non statutory consultees, this has included the local Flood Action Group and Natural England who have confirmed their support for the proposed scheme. Through this consultation it was concluded that a statutory environmental impact assessment would not be required as part of this planning application. However it was agreed that a series of ecological surveys would be undertaken prior to commencement of the works, this should include flora and fauna, wintering birds, reptiles and bats.

In addition the scheme has been discussed with the county archaeologist and it is agreed that a geophysical survey and field evaluation by trial trenching will be undertaken in advance of construction.

Three alternative arrangements for the layout of the flood storage area have been considered and presented within this planning application. The final arrangement will be selected following the output of ecological surveys, site and archaeological investigation and consultation with local land owners .

Consideration has been given to the potential presence of Brent Geese in the local area. The presence of Wintering Brent Geese are considered to be unlikely, the Flood Storage Area will create a wetland habitat suitable for wintering Brent Geese.

The site is in close proximity to the A27 and as a consequence the noise from construction is unlikely to prevail over local traffic noise.

Visual Impact / Appearance:

The scheme will be sensitively landscaped in a way which is intended to enhance the visual impact and provide habitat which will encourage wildlife. The earth bunds will be planted with grassland and natural shrub planting. The landscaping is intended to conserve the local character, with tree and shrub planting reinforcing the roadside vegetation of the A27.

There is limited public access to the site, the nearest houses are situated on Selangor Avenue and Victoria Road at the edge of Emsworth, 200m to the south and screened by the tree-covered A27 embankment. The residential area of Denvilles is about 200m to the west, with views to the site over open farmland. Any other properties and publicly accessible viewpoints to the north, east and west are over 1km distance.

Site Access Arrangements:

Vehicle Access to the site for construction will be via the existing farm track located to the North and East of the site as detailed on the site access drawing included with this application. This farm track will be accessed from the B2148 Horndean Road,

via Southleigh Road. This track would then also serve as a permanent access for maintenance.

Access for construction will not be required outside of normal working hours (Monday – Friday 08:00 – 17:30).

Maintenance:

Once constructed the Flood Storage Area will not require frequent maintenance.

The following maintenance regime will be applied:

- An annual inspection will be undertaken to inspect general condition.
- A monthly inspection of the condition of the trash screen and clearance of debris as required.
- Annual vegetation management will be undertaken as required, which may include tree pruning and reduction of hedgerows as necessary.

An access track will be installed as part of the works, providing access from Horndean road for pedestrians and 4x4 vehicles for routine inspections and periodic maintenance.

Maintenance would be scheduled to be undertaken during normal working hours.

The control structure would require replacement at 60 year intervals.

The Environment Agency will be responsible for the ongoing maintenance of this wetland habitat, however the Environment Agency has entered into discussions with a local community group who have identified the potential for this to be managed as a local nature reserve. Further discussions are required to finalise this agreement. In the event that this agreement is not concluded the Environment Agency is committed to the ongoing maintenance needs to maintain this facility.

Relevant Planning History:

A planning pre-application meeting was held on the 15th January 2014, with the Environment Agency and Havant Borough Council.

Planning Application for development of land Manor Farm and Copseys Nursery (application references APP / 13/ 00752 and APP/12/01222) was approved by Havant Borough Council in August of 2013. This development proposes the construction of 100 dwellings and associated landscaping in land to the East of the existing Denvilles residential area. The presence of this proposed development have been considered in the development of the preferred option.

This planning application has also been developed with consideration of proposed developments at land west of Horndean road and land at Cold harbour farm road to the East of the proposed development. A formal planning application is yet to be submitted for these works by the developer.

Conclusion:

- The scheme will provide flood alleviation benefits to local properties
- The scheme will have no adverse impact on neighbouring properties
- The scheme will create a small (2 hectare) reduction in productive arable land
- The scheme will provide wet land habitat benefits and enhanced visual amenity.