Murphy, David

From: Gilbert, Andrew [Andrew.Gilbert@sepa.org.uk]
Sent: 31 January 2011 15:53
To: Murphy, David
Cc: Carol Jones
Subject: RE: A68 Soutra South to Oxton Improvement - Headshaw Burn Bank Protection Measures

David,

I can confirm further to our discussions on 10 December 2010, V3 of the design report and the details provided in the e-mail below that SEPA is in agreement in principle on all of the bank protection proposed – both in terms of the methods and the locations.

As discussed I will need to confirm the levels of CAR authorisation required for the rock rolls. Where several layers of rock roll are proposed this is likely to be more than toe of bank protection, and may require a CAR simple licence (rather than Registration for green bank protection) – this can be confirmed when it comes to the CAR authorisation stage of the project.

Regards,

Andrew Gilbert
Environment Protection Officer
SEPA Borders Operations Team, Galashiels
01896 754797 Ext 2204; 07917158174

From: Murphy, David [mailto:DMurphy@scotborders.gov.uk]
Sent: 11 January 2011 16:54
To: 'Carol Jones'; Gilbert, Andrew
Cc: Morris, Anthony
Subject: A68 Soutra South to Oxton Improvement - Headshaw Burn Bank Protection Measures

Carol/Andrew,

Further to our meeting on 10th December 2010, I write to confirm the outcome of our various discussions and to provide you with the additional information you require.

Please find attached an amended version of the bank protection design report, which has been revised to include the changes and additional information detailed below. The PDF copy of the report also includes revised copies (Rev A) of Drawings No. 245 and 246.

Concerns were raised at the meeting regarding the use of rock rolls as protection to the toe of the slopes. Your concerns included their long term durability and how effectively they will vegetate. Having discussed these issues with the suppliers, Salixrw Ltd, I can confirm that the rock rolls are designed to withstand high stresses (30kN/m). They have been independently tested to withstand flow induced shear stresses of over 700 N/m^2, which is greater than 700mm diameter block stone/riprap (velocities at Headshaw Burn would only require 350mm rip rap). The high tensile strength 3mm braided polyethylene yarn has a high density, exhibits very low water absorption and has a high UV stability. The net is also more resilient than gabion wire which loses the protective coating through abrasion from moving gravels and thereafter quickly rusts and abrades until the wire fails.

I can also confirm that it is now proposed to combine the use of the rock rolls with a 200mm diameter pre-vegetated coir rolls, which will help to ensure and accelerate the establishment of vegetation within and around the rock rolls. Furthermore, the fact that the rock/coir rolls will be underlain with the geotextile will prevent any likelihood of scour in behind.

Further information or contact details for the previous Scottish projects involving the use of rock rolls can be provided if required.

In terms of the rationale behind using a synthetic geotextile as opposed to a biodegradable one, I can confirm that a synthetic geotextile is required to withstand to the long term shear forces involved. Now that the Headshaw Burn has become more mobile along this stretch, it is considered that the existing vegetated burn banks in the proximity of the existing and proposed roads, which are shown to consist of relatively weak material, require additional reinforcement to protect them from eroding in the future.

I can also confirm that the synthetic geotextile proposed is designed to enable the burn banks to re-establish effectively. Further information relating to the ground preparation and geotextile installation is given in the Construction Method Statement which will be provided in a separate email. Adherence with this installation process will ensure effective re-establishment of the banks.

It is worth noting that, as part of the erosion protection works upstream of the Annfield Inn Bridge (arch bridge to the north of the A68, below the D47/5 side road to Carfrae), it is proposed to enhance the riparian corridor with additional tree planting.

I hope the above helps alleviate your concerns, however if you require any additional information, just let me know.

As indicated in our telephone conversation earlier today, I will issue the revised Construction Method Statement in a separate email.

Regards,

David Murphy
Project Manager
Technical Services
Scottish Borders Council
Newtown St Boswells
TD6 0SA

Tel: 01835 826665
Fax: 01835 825071

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Murphy, David

From: Carol Jones [Carol.Jones@snh.gov.uk]
Sent: 01 February 2011 11:21
To: Murphy, David
Cc: Andrew Gilbert
Subject: A68 Soutra South to Oxton Improvement - Headshaw Burn Pank Protection Measures

David,

A68 Soutra South to Oxton Improvement - Headshaw Burn Pank Protection Measures River Tweed Special Area of Conservation

Thank you for consulting Scottish Natural Heritage (SNH) on the design of the bank protection on the Headshaw Burn adjacent to the A68 South Soutra to Oxton Improvement Scheme and the associated construction method statement.

The Headshaw Burn is designated as part of the River Tweed Special Area of Conservation (SAC) under the EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (the "Habitats Directive") for its biological interest, including Atlantic salmon, river lamprey, brook lamprey, sea lamprey, European otter and as a water course characterised by Ranunculion fluitantis and Callitricho-Batrachion communities.

I can confirm that further to our meeting on the 10 December 2010, version 3 of the design report (December 2010) and the details provided in the e-mail dated 11 January 2011, that we have no objection in principle to the bank protection proposed – in terms of the methods and the locations. However, we do have the following comments to make:-

- The use of rock rolls will tend to speed up the flow of water as well as making the flow pattern more uniform. The alteration of the fluvio dynamics of the river can lead to the loss of lamprey and salmon spawning areas and increase or change the pattern of erosion down stream of the work.
- We welcome the use of planted coir rolls, and recommend that the choice of species used should be local to the area in order to enhance establishment.

I can confirm that the construction method statement (version dated 10 January 2011) is satisfactory and at present we have no further comments to make.

We should be advised of modifications or amendments, which may affect the natural heritage interests of the site.

If there are any further issues in relation to the proposed work on which you would like our input or if you wish to discuss the above points, then please to do not hesitate to contact me.

Yours sincerely
Carol

Carol Jones
Area Officer
Forth & Borders

Scottish Natural Heritage
Anderson's Chambers
Market Street
Galashiels
TD1 3AF

Telephone No. 01896 756652