**Strategic Flood Risk Assessment for Scottish Borders**

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## Part 1: Strategic Flood Risk Assessment
## Introduction

The Main Issues Report (MIR) and the Local Development Plan (LDP) preparation process requires to be informed and supported by a strategic overview of flood risk management issues in the form of a Strategic Flood Risk Assessment (SFRA).

A SFRA should provide a strategic overview of flood risk in the LDP area and support the identification of the areas most suitable for development and areas that should be safeguarded for sustainable flood management. The SFRA has been developed in liaison with the Scottish Environment Protection Agency (SEPA) and the Council's Flood Protection team.

## Aims and Objectives

The primary aim is to avoid locating new development in areas of flood risk by giving careful consideration to the implications of coastal/tidal and fluvial or river based flooding. The main objectives of the SFRA are:

- Ensure development **does not take place in areas of flood risk** or contribute to flooding elsewhere;
- Provide the baseline for the Environmental Report;
- Identify the flood risk areas based on the risk framework in Scottish Planning Policy (SPP); and
- Provide an evidence-based report to inform the LDP.

The key role of the SFRA is to help determine whether the potential development sites identified within the MIR are suitable for allocation as part of the subsequent plan making stage. It should also mean that flood risk mitigation measures will not be necessary to overcome flood risk as those sites should be 'screened out' as part of the allocation of sites.

## Background

The Flood Risk Management (Scotland) Act 2009 sets in place a statutory framework for delivering a sustainable and risk-based approach to managing flooding. This includes the preparation of assessments of the likelihood and impacts of flooding, and catchment focused plans to address these impacts. By 2015 flood risk management plans will be in place across Scotland which should then be taken into account when development plans are prepared. However, in the interim and to provide a baseline to inform the LDP it is considered that it would be helpful to prepare a SFRA to ensure that new development would be free from significant flood risk and that it would not increase flooding elsewhere.

A SFRA should provide a strategic overview of flood risk in the LDP area and support the identification of the area most suitable for development and areas that should be safeguarded for sustainable flood management.

## Planning Policy

Scottish Planning Policy (SPP) suggests that land allocated for development should be located in areas with the lowest risk of flooding first and in areas of highest risk last. The document contains a Risk Framework which shows the return period and probability associated with the river and coastal flooding as shown in Table 1 below.

Table 1: Risk Framework

| **RISK FRAMEWORK** |
| --- |
| **Little or No Risk** - annual probability of watercourse, tidal or coastal flooding is less than 0.1% (1:1000)<br><br>• No constraints due to watercourse, tidal or coastal flooding. |
| **Low to Medium Risk Area -** annual probability of watercourse, tidal or coastal flooding in the range 0.1% - 0.5% (1:1000 - 1:200)<br><br>• These areas will be suitable for most development. A flood risk assessment may be required at the upper end of the probability range (i.e. close to 0.5%) or where the nature of the development or local circumstances indicate heightened risk. Water resistant materials and construction may be required depending on the flood risk assessment. Subject to operational requirements, including response times, these areas are generally not suitable for essential civil infrastructure such as hospitals, fire stations, emergency depots etc. Where such infrastructure must be located in these areas or is being substantially extended it should be capable of remaining operational and accessible during extreme flooding events. |
| **Medium to High Risk** - annual probability of watercourse, tidal or coastal flooding greater than 0.5% (1:200)<br><br>• Generally not suitable for essential civil infrastructure such as hospitals, fire stations, emergency depots etc., schools, care homes, ground-based electrical and telecommunications equipment unless subject to an appropriate long term flood risk management strategy. The policy for development on functional flood plains applies. Land raising may be acceptable.<br>• If built development is permitted, appropriate measures to manage flood risk will be required and the loss of flood storage capacity mitigated to produce a neutral or better outcome.<br>• Within built up areas, medium to high risk areas may be suitable for residential, institutional, commercial and industrial development provided flood prevention measures to the appropriate standard already exist, are under construction or are planned as part of a long term development strategy. In allocating sites, preference should be given to those areas already defended to required standards. Water resistant materials and construction should be used where appropriate.<br>• In undeveloped and sparsely developed areas, medium to high risk areas are generally not suitable for additional development. Exceptions may arise if a location is essential for operational reasons, e.g. for navigation and water based recreation uses, agriculture, transport or some utilities infrastructure and an alternative lower risk location is not achievable. Such infrastructure should be designed and constructed to remain operational during floods. These areas may also be suitable for some recreation, sport, amenity and nature conservation uses provided adequate evacuation procedures are in place. Job-related accommodation (e.g. caretakers and operational staff) may be acceptable. New caravan and camping sites should not be located in these areas. If built development is permitted, measures to manage flood risk are likely to be required and the loss of flood storage capacity minimised. Water resistant materials and construction should be used where appropriate. |

Scottish Borders Council's (SBC) policies on flooding (Consolidated Structure Plan I15 and Consolidated Local Plan G4) comply with the national policy and discourage development from taking place in areas which are, or may become, subject to flood risk. The Consolidated Structure Plan seeks to minimise damage from flooding by identifying areas of particular risk from flooding in Local Plans and safeguard flood plains and other low lying land adjacent to rivers from further development and maintain a presumption against development which would create an unmanageable risk of flooding or which would create or intensify an unmanageable flood risk elsewhere.

## Assessment Process

The MIR is looking to allocate land for 400 housing units for 2019-2024 and land for a range of other types of development including regeneration and employment to take forward to the LDP. The assessment of land includes the consideration of potential flood risk at both strategic and detailed level. The strategic assessment included in this report consists of information from SEPA and the Council's Flood Management Team available at the time of preparation of the SFRA. The SFRA also includes relevant planning policy on national and local level and how the Council comply with these policies. The SFRA includes Areas Potentially Vulnerable to Flood Risk and Indicative Flood Risk Maps from SEPA as well as data on historic flood events and existing and planned flood defence in the region. Part 2 of the SFRA details the detailed assessment process for land considered for development.

## Study Area Flood Sources

SEPA has as a part of the National Flood Risk Assessment identified Local Plan Districts based on river catchments and Potentially Vulnerable Areas where there is a risk of flooding. This SFRA covers the SBC area, which includes parts of three Local Plan Districts identified by SEPA, namely Tweed, Solway and Forth Estuary. The main source of flood risk in the Borders is from rivers, and also coastal flooding along the coastline. There is also risk of flooding from surface water run off after intense rain fall. A large proportion of all households in the Borders are at risk of flooding and fall within the Potentially Vulnerable Areas identified by SEPA.

The following table provides a summary of the information for the Scottish Borders.

Table 2: Flood Risk in Potentially Vulnerable Areas

| **Local Plan District (Ref. no for Potentially Vulnerable Areas)** | **Main River Catchment** | **Known Sources of Flooding** | **Towns and Villages with Properties at Risk (more than 50 properties at risk)** |
|---|---|---|---|
| Tweed (13/01) | River Tweed | River (93%)<br>Surface Water (7%) | West Linton |
| Tweed (13/02) | Whiteadder Water | Surface Water (53%)<br>River (47%) | N/A |
| Tweed (13/03) | River Tweed | River (56%)<br>Surface Water (44%) | N/A |
| Tweed (13/04) | River Tweed | River (83%)<br>Surface Water (17%) | Innerleithen, Peebles, Eddleston, Galashiels, Selkirk |
| Tweed (13/05) | River Tweed | River (55%)<br>Surface Water (45%) | N/A |
| Tweed (13/06) | River Tweed | River (63%)<br>Surface Water (37%) | Coldstream |
| Tweed (13/07) | River Tweed | River (84%)<br>Surface Water (16%) | Biggar (South Lanarkshire) |

| | | | |
|---|---|---|---|
| Tweed (13/08) | River Tweed | River (95%)<br>Surface Water (5%) | Broughton |
| Tweed (13/09) | River Tweed | River (59%)<br>Surface Water (41%) | Kelso |
| Tweed (13/10) | River Tweed | River (60%)<br>Surface Water (40%) | Jedburgh |
| Tweed (13/11) | River Tweed | River (53%)<br>Surface Water (47%) | N/A |
| Tweed (13/12) | River Tweed | River (78%)<br>Surface Water (22%) | Hawick |
| Tweed (13/13) | River Tweed | River (75%)<br>Surface Water (25%) | N/A |
| Solway (14/03) | River Esk | River (96%)<br>Surface Water (4%) | Newcastleton |
| Forth Estuary (10/26) | Berwick Coastal | Coastal (64%)<br>Surface Water (28%)<br>River (8%) | N/A |

Source: Potentially Vulnerable Area Datasheets (Tweed, Solway, Forth Estuary), SEPA 2011.

A number of towns in the Scottish Borders fall within the Potentially Vulnerable Areas. Further assessment of flood risk is carried out during the process of identifying land for development to include in the MIR and LDP. The detailed assessment differs from the Potentially Vulnerable Areas in that it includes smaller towns and villages and also areas where less than 50 properties are at risk of flooding. For more details see Part 2: Site Assessments.

## Scottish Borders Council Flood Risk Strategy

SBC has an agreed prioritisation programme from 2007 which was drawn up after initial flood studies in seven communities with significant flooding issues were carried out. The prioritisation programme included Stow, Hawick, Jedburgh, Peebles, Selkirk, Newcastleton and Galashiels. The approved Flood Prevention Scheme Implementation Programme includes:

- Short/medium term (2-5 years) – Galashiels, Selkrik and Hawick
- Medium/long term (3-8+ years) – Stow, Jedburgh, Peebles and Newcastleton

After changes to the Scottish Government funding system at the end of 2007 the Council changed to a more flexible strategy aiming for a balance between formal Flood Protection Schemes that protect larger communities from flooding and smaller scale works to protect individual and small groups of properties, lower cost watercourse efficiency measures, and investment in equipment that can be activated during the flooding event (Community Resilience). This more flexible approach allows the Council to, in rural areas and isolated settlements, adopt more on the ground practical measures such as building short lengths of direct defence or improving the watercourse efficiency that do not require to follow the full formal process, while keeping the more holistic approach to flood protection of the larger settlements.

A 'Local Flood Risk Management Plan – Update Report' is required to be produced under the Flood Risk Management (Scotland) Act 2009. SBC has previously produced biennial reports to report on maintenance and progress on planned flood protection schemes and works. The reports also included any work on Natural Flood Risk Management and a list of recent flooding in the area.

## Flood Defence

This section includes flood prevention schemes, flood protection works and community resilience. Note however, flood defences reduce the risk of flooding but are only designed to protect for a flood of a given size. This means flooding can happen in areas with flood defence if the flood exceeds the level of flood the defence is designed for.

### Flood Prevention Schemes

Planned flood prevention schemes:

- Galashiels Flood Prevention Scheme

The Flood Prevention Scheme is being taken forward under the Flood Prevention (Scotland) Act 1961 and is currently at detailed design stage. Construction of the first phase is expected to start in April 2013.

- Selkirk Flood Protection Scheme

The scheme is being taken forward under the Flood Risk Management (Scotland) Act 2009 and is at formal scheme publication stage. The construction of the first phase of the work is planned for 2015/16.

- Hawick Flood Protection Scheme

This scheme is also being taken forward under the Flood Risk Management (Scotland) Act 2009. It is currently at option evaluation and consultation stage leading to a preferred scheme. The scheme is not expected to be taken forward before 2018/19.

Existing flood prevention schemes:

Table 3: Existing flood prevention schemes

| **Scheme name** | **Watercourse** | **Town** | **Length of scheme (km)** | **Description** |
|---|---|---|---|---|
| Galashiels - Netherdale Flood Prevention Scheme 1987 | Gala Water | Galashiels | 0.572 | The flood defence works comprising the Galashiels Netherdale Flood Prevention Scheme consist of earth embankments, reinforced concrete floodwalls and gabion protection. |
| Ettrick Water and Yarrow Water Flood Prevention Scheme 1979 | Yarrow Water | Ettrick | 0.738 | Flood embankment. |
| Lauder Station Yard Flood Prevention Scheme 1990 | Tributary of Washing Burn | Lauder | 0.645 | Some localised flooding in 1987 and 1988 caused investigation of measures to alleviate flooding. Culvert improvements were made to upgrade the capacity to carry the 25mm rainfall event, which is close to a 100 year event. A 48 ha site drains to 2 culverts. The culverts collect the upper catchments and the drainage from the new |

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| | | | | industrial estate constructed on the station yard. Flows then pass to the Washing Burn in a 600mm culvert. |
| Galashiels – Plumtree/Wilderhaugh Flood Prevention Scheme 1987 | Gala Water | Galashiels | 0.559 | The flood defence works consist of earth/rock embankments, brick and masonry floodwalls, gabion floodwalls and some gabion protection next to the retail park access bridge. |
| Peebles – Southpark Area Flood Prevention Scheme 1987 | Edderston Burn and surface run-off from fields | Peebles | 0.436 | The purpose of the scheme is to mitigate the flooding of Caledonian Road, Southpark Drive and Southpark West areas of Peebles by surface run-off from the fields to the south-west of Southpark and overflows from Edderston Burn. Construction of a diversion channel and weir on the Edderston Burn, a screen at Southpark Road connected by culvert to an outfall into the River Tweed, a protective embankment over the culvert and regarding of the existing open channel. |
| Innerleithen Hall Street Flood Prevention Scheme 1998 | Chapmans Burn and field run-off | Innerleithen | 1.288 | The scheme was designed to mitigate the flooding of St Ronan's Terrace, Hall Street and High Street. The source of flooding is from surface-runoff and watercourses upstream of Hall Street. Flooding occurs during periods of prolonged and heavy rain. Construction of pipes and drains, intakes and outfalls to divert water from the Chapmans Burn and field run-off through the town of Innerleithen to the River Tweed. |
| Jed Water Flood Prevention Scheme 1987 | Jed Water | Jedburgh | 0.065 | The scheme is designed to mitigate flooding of Richmond Row, Duck Row and Bankend areas of Jedburgh by the Jed Water. The scheme consists of flood embankment, floodgate and wall at Richmond Row and scrub clearance downstream at Bankend. The floodwall has 2 windows. |
| Denholm Flood Prevention Scheme 1985 | Runoff from hill slopes causes flooding | Denholm | 1.117 | The scheme is designed to divert surface runoff from surrounding fields into a culvert system that runs through the town and outfalls into the River Teviot adjacent to the sewage works. At the upstream extent of the |

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| | | | | scheme surface runoff is diverted into two culvert inlets via an embankment, french drain and ditch. The purpose of the scheme is to mitigate flooding of the Ashloaning, The Loaning, Eastgate and Eastlea Drive. |
| Turfford Burn Flood Prevention Scheme 1967 | Turfford Burn | Earlston | 1.502 | The scheme operations include the construction of a diversion channel and culvert, main channel regarding and the construction of flood embankments. The diversion intake, channel and culvert upgraded in 1994. |
| Jedburgh – Skiprunning Burn Culvert Flood Prevention Scheme 1985 | Skiprunning Burn | Jedburgh | 0.5 | The purpose of the scheme is to mitigate the flooding of Exchange Street, Friars and Pleasance areas of Jedburgh. The operations are located at Exchange Street, Friars and Pleasance and include reconstruction of the culvert. There is a trash screen on the culvert inlet and additional gullies to prevent overland flow. Also 2 primary screens in the burn. Parts of culvert were upgraded and telemetry installed on the inlet. |

### Flood Protection Works

Flood protection works are on a smaller scale than flood protection schemes. A number of projects have been taken forward in the Scottish Borders in the last few years;

- Hawick High School Flood Wall
- Broadmeadows East Burn Flood Relief Channel
- Newcastleton Drainage Improvements
- Weensland Cauld Removal
- Hawick Vegetation Clearance
- Selkirk Long Philip Burn Sediment Management

It is hoped that it will be easier under the new Flood Act to take forward flood protection work where land acquisition is not necessary.

### Community Resilience

The Council's Emergency Planning Team and the Flood Protection Team work closely together to deliver measures aimed at improving community resilience in relation to flooding. The aim is to raise awareness for those at risk of flooding and to assist in their preparation for a flood event. Examples include a flood warning system (now partially taken over by SEPA), provision of sandbags, subsidised flood products scheme and support to self-help groups.

## Natural Flood Risk Management

Scottish Borders Council has a desire to move to more sustainable solutions in the implementation of flood protection schemes and is co-operating with other agencies to take forward studies, research and demonstration projects to help establish suitable measures for natural flood management and to determine the evidence for the benefits of these measures.

Upstream flood storage is included in natural flood risk management and the Council's Flood Protection Team plan and set up projects together with Tweed Forum through negotiation with farmers and landowners. Table 4 includes planned and implemented projects to reduce flooding in Borders settlements.

Table 4 Natural Flood Risk Management

| Catchment | Location | Management | Planned/Implemented |
|---|---|---|---|
| Gala Water (contributing to flood risk reduction in Stow and Galashiels – augmenting Galashiels Flood Protection Scheme) | | | |
| | Hangingshaw Farm | 25ha native tree + water margin | Implemented |
| | Crookston Farm | 26ha riparian tree + shallow scapes to act as flood storage | Implemented |
| | Stagehall Farm | Flood storage pond and leaky barrier on flood plain | Implemented |
| | Halkburn Farm | 1400m water margin with riparian trees | Implemented |
| Leader Water (contributing to flood | | | |

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|---|---|---|---|
| risk reduction in Oxton) | | | |
| | Airhouse Farm | 6 ponds as flood storage and 3ha riparian trees with large areas of water margin | Implemented |
| Ettrick Water (contributing to flood risk reduction in Selkirk – augmenting Selkirk Flood Protection Scheme) | | | |
| | Foulshields Farm | Upland gully planting and moorland management | Planned |
| | Linglie Farm | Riparian woodland planting | Planned |
| | Other locations | To be determined | Planned |
| Teviot Water (contributing to flood risk reduction in Hawick – augmenting Hawick Flood Protection Scheme) | | | |
| | Bowanhill Farm | Wet woodland creation on flood plain plus sediment management | Planned |
| | Other locations | To be determined | Planned |
| Eddleston Water (contributing to flood risk reduction in Eddleston and Peebles) | | | |
| | Nether Falla Farm | 6ha riparian woodland | Planned |
| | Shiplaw Farm | 6ha riparian woodland | Planned |
| | Burrow Farm | 6ha riparian woodland | Planned |
| | Darnhall Farm | 6ha riparian woodland | Planned |
| | Portmore Estate | 6ha riparian woodland | Planned |
| | Burnhead Farm | 6ha riparian woodland | Planned |
| | Violet Bank | 6ha riparian woodland | Planned |
| Bowmont Water (contributing to farm resilience to flooding and sediment management) | | | |
| | Clifton-on-Bowmont Farm | Erodable river corridor bank stabilisation | Implemented |
| | Cocklawfoot Farm | Erodable river corridor bank stabilisation | Planned |
| | Kelso Cleuch | Erodable river | Planned |

| | | | |
|---|---|---|---|
| | | corridor bank stabilisation | |
| | Venchen Farm | Erodable river corridor bank stabilisation | Planned |
| | Halter Burn Farm | 35ha upland gully planting with native trees | Planned |
| | Mowhaugh | 6ha upland gully planting with native trees | Planned |
| | Cocklawfoot Farm | Upland gully planting with native trees | Planned |
| | Surhope Farm | Upland gully planting with native trees | Planned |
| | Clifton-on-Bowmont Farm | 47 no Apex log jams on flood plain on 3 farms | Planned |
| | Cocklawfoot Farm | Apex log jams on flood plain | Planned |
| | Kelsocleuch Farm | Apex log jams on flood plain | Planned |

Crookston Natural Flood Risk Management Photo: Hugh Chalmers, Tweed Forum

## Historical Flooding

Flooding is a significant issue in the Scottish Borders and there is a long history of flooding events. In recent years there has been serious flooding in Hawick, Peebles, Galashiels and Newcastleton. The table below and map 1 provide information on flooding events over the last 5 years.

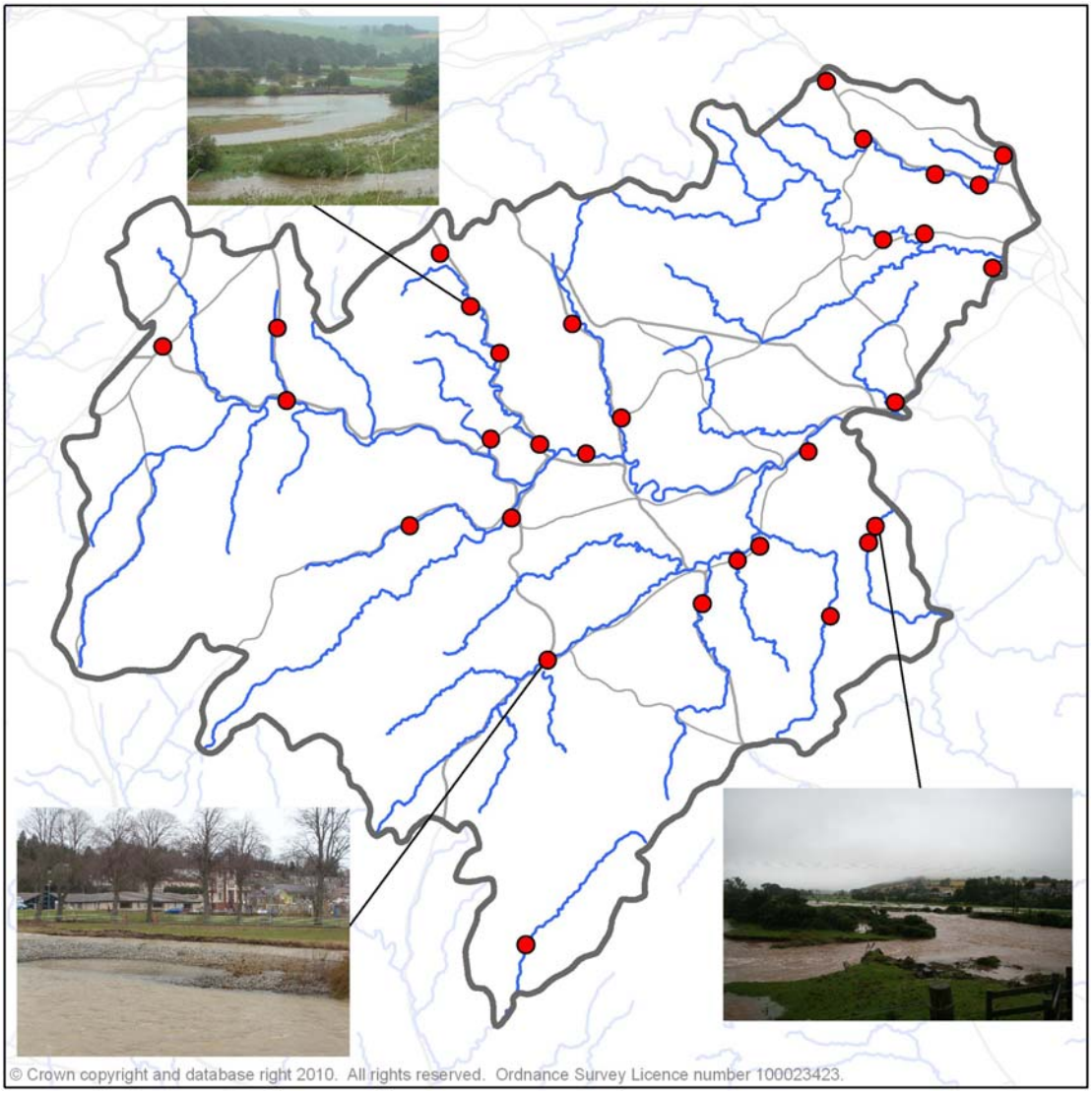
Table 5 Historic Flooding Events

| Date | Settlement | Event |
|---|---|---|
| 2 August 2011 | Selkirk | Near miss |
| 5 February 2011 | Hawick | Near miss |
| 15 January 2011 | Hawick | Near miss |
| 31 March 2010 | Eyemouth (Harbour Area) | Coastal flooding |
| | Earlston | Flooding & Fluvial flooding |
| | Jedburgh | Fluvial flooding |
| | Reston | Flooding |
| | Gattonside | Flooding |
| 30 March 2010 | Ayton | Flooding |
| | Reston | Flooding |
| | Earlston | Flooding |
| | Jedburgh | Flooding |
| 27 February 2010 | Reston | Flooding |
| 18 January 2010 | Jedburgh | Fluvial flooding |
| | Selkirk | Flooding |
| | Earlston | Flooding |
| 17 January 2010 | Jedburgh | Fluvial flooding |
| 16 January 2010 | Hawick | Flooding |
| | Coldstream | Flooding |
| | Sprouston | Flooding |
| | Galashiels | Pluvial flooding |
| | Earlston | Flooding |
| | Jedburgh | Flooding |
| | Ayton | Flooding |
| | Jedburgh | Fluvial flooding |
| | Peebles | Fluvial flooding |
| 26 November 2009 | Yarrow & Ettrick Water | Fluvial flooding |
| 20 November 2009 | Yarrow Water | Fluvial flooding |
| 19 November 2009 | Tweed, Ettrick & Teviot | Fluvial flooding |
| 3 September 2009 | Peebles | Flooding |
| | Jedburgh | Flooding |
| | Galashiels | Flooding |
| | Stow | Flooding |
| 20 August 2009 | Ettrick | Flooding |
| 18 July 2009 | Jedburgh | Fluvial flooding |
| | Yetholm | Flooding |
| | Paxton | Pluvial flooding |
| | Reston | Flooding |
| 17 July 2009 | Hawick | Flooded gully |
| | Grantshouse | Flooding |
| | Chirnside | Flooding |
| | Ayton | Flooding |
| | Jedburgh | Fluvial flooding |
| | Eyemouth | Flooding |
| | Reston | Flooding |
| 12 January 2009 | Jedburgh | Flooding |
| 12 October 2008 | Teviot & Slitrig Water (Hawick) | Fluvial flooding |
| 7 September 2008 | Stow | Flooding |
| | Bowmont | Flooding |
| | Galashiels | Flooding |

| | | |
|---|---|---|
| | Edrom | Flooding |
| | Preston | Flooding |
| | Eddleston | Flooding |
| | Peebles | Flooding |
| | Heriot | Flooding |
| | Fountainhall | Flooding |
| 6 September 2008 | Newcastleton | Surcharged Drains |
| | Jedburgh | Fluvial flooding |
| | Galashiels | Fluvial flooding |
| | Bowmont | Fluvial flooding |
| | Sprouston | Flooding |
| | Hownam | Surface Water |
| | Eckford | Flooding |
| | Yetholm | Flooding |
| | Bowmont | Fluvial flooding |
| | Hawick | Flooding |
| | Crailing | Flooding |
| 8 August 2008 | Clovenfords | Flooding & Pluvial flooding |
| | Eyemouth | Flooding |
| | Cockburnspath | Flooding |
| | Stow | Flooding |
| | Galashiels | Surface Water |
| | Broadmeadows | Flooding |
| | Selkirk | Flooding |
| | The Nest, A72 | Culvert flooding |
| | Ettrick | Flooding |
| | Cockburnspath | Flooding |
| 7 August 2008 | Selkirk | Fluvial flooding |
| 10 June 2008 | Newcastleton | Flooding |
| | Mosspaul | Flooding |
| | Saughtree | Flooding |
| | Hawick | Flooding |
| | Jedburgh | Flooding |
| | Liddle Water | Fluvial flooding |
| 10 January 2008 | Hawick | Surface Water |
| | Galashiels | Surface Water |
| 9 January 2008 | Galashiels | Surface Water |
| | Lauder | Pluvial flooding |
| | Fountainhall | Fluvial flooding |
| October 2007 | Blyth Bridge | Burst water main |
| 22 June 2007 | Clovenfords | Pluvial flooding |

Source: Scottish Borders Council

Map1: Flooding events 2007-2011

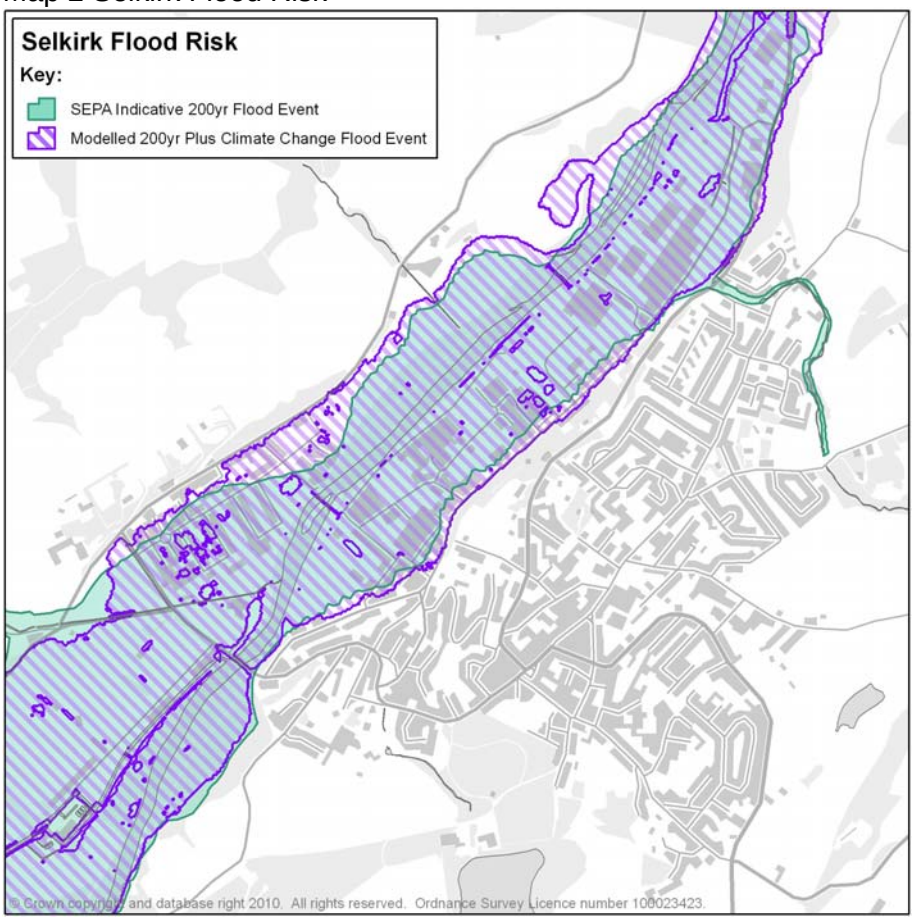


## Climate Change

It is expected that flooding will become a greater problem in the future due to the impact of climate change. SEPA indicates a moderate predicted increase in rainfall with proportionate increase in flooding and consider that the coastal area in Berwickshire is not vulnerable to the impacts of climate change.

Map 2 shows the 1:200 flood risk in Selkirk using SEPA's Indicative Flood Risk Map which does not factor in climate change and the 1:200 flood risk including allowance for climate change, based on modelling for Selkirk Flood Protection Scheme. The effect of climate change results in new areas being under risk of flooding but also small pockets of land that are free of flooding.

Map 2 Selkirk Flood Risk

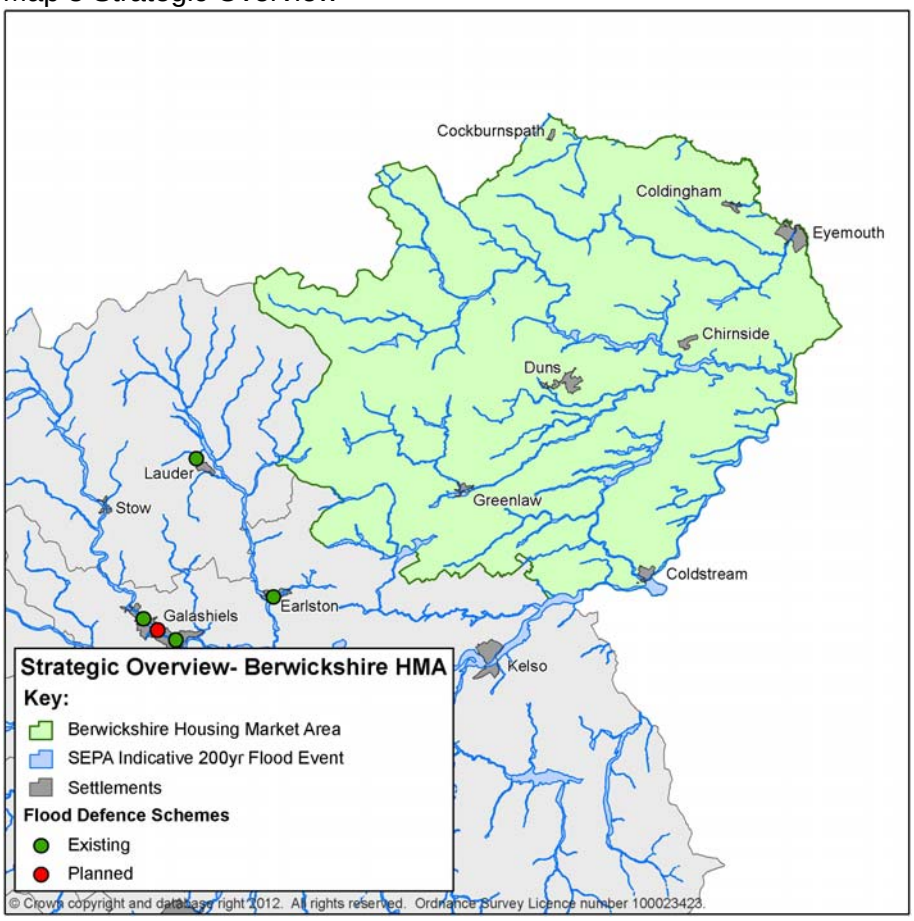


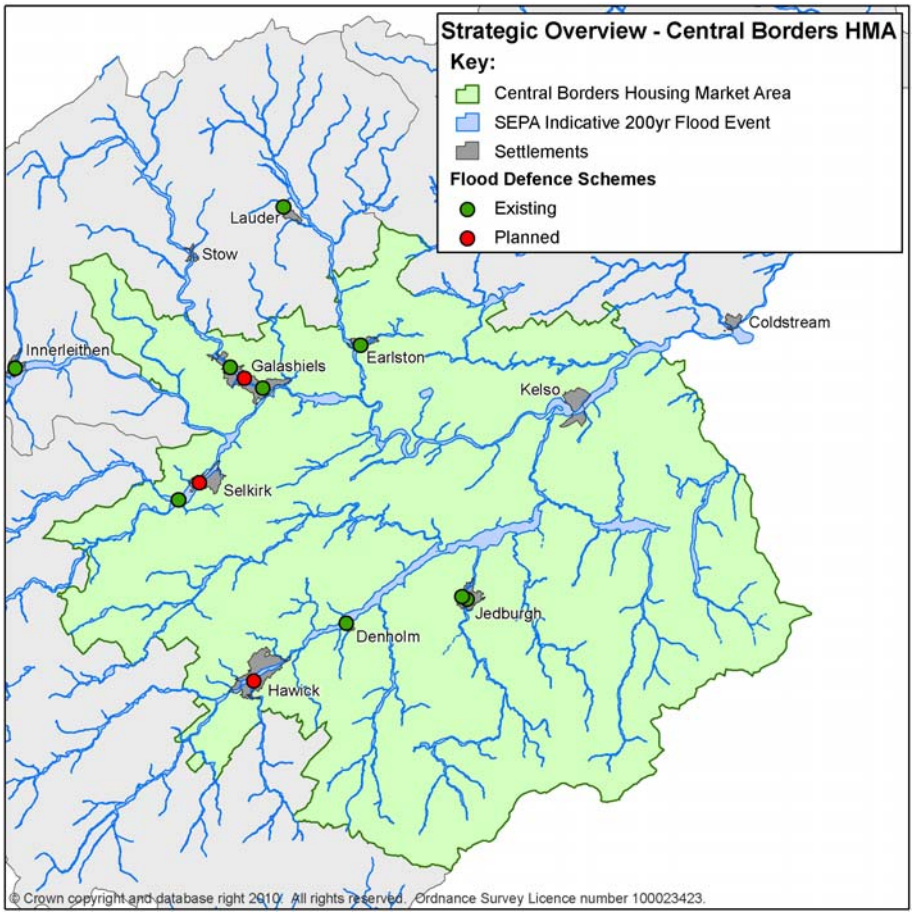

It should be noted that the SEPA Indicative Flood Risk Map does not take into account flood prevention schemes, coastal defences, predicted climate change or the effect bridges and other structures such as culverts may have on a flood. The maps do not include the potential flood risk from watercourses with a catchment of less than 3km².

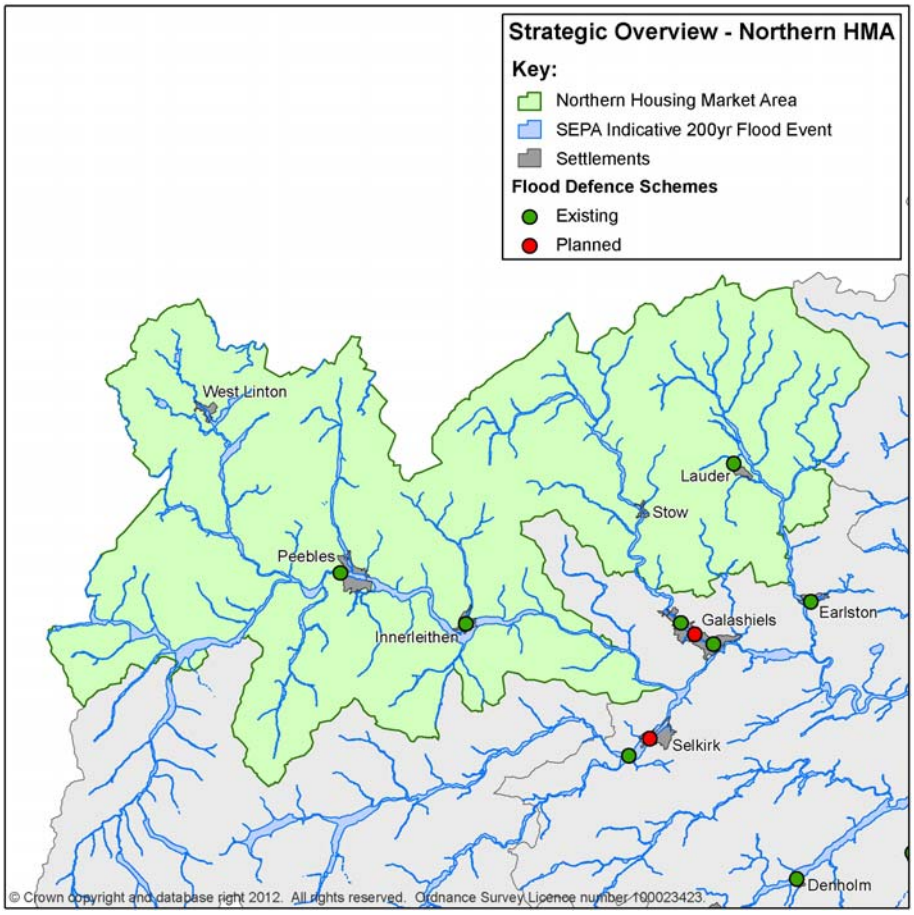
## Strategic Overview

The maps below show areas at risk of flooding on a strategic level. The maps show the Indicative Flood Risk (SEPA) and existing and planned flood defence. The information is presented per Housing Market Area. Many Border towns were located close to the rivers to take advantage of the water for mills. The historic location creates difficulties in finding suitable land for development and the importance of the site assessment process.

Map 3 Strategic Overview




Strategic Overview - Northern HMA
Key:
Northern Housing Market Area
SEPA Indicative 200yr Flood Event
Settlements
Flood Defence Schemes
Existing
Planned
West Linton
Peebles
Innerleithen
Lauder
Stow
Galashiels
Earlston
Selkirk
Denholm
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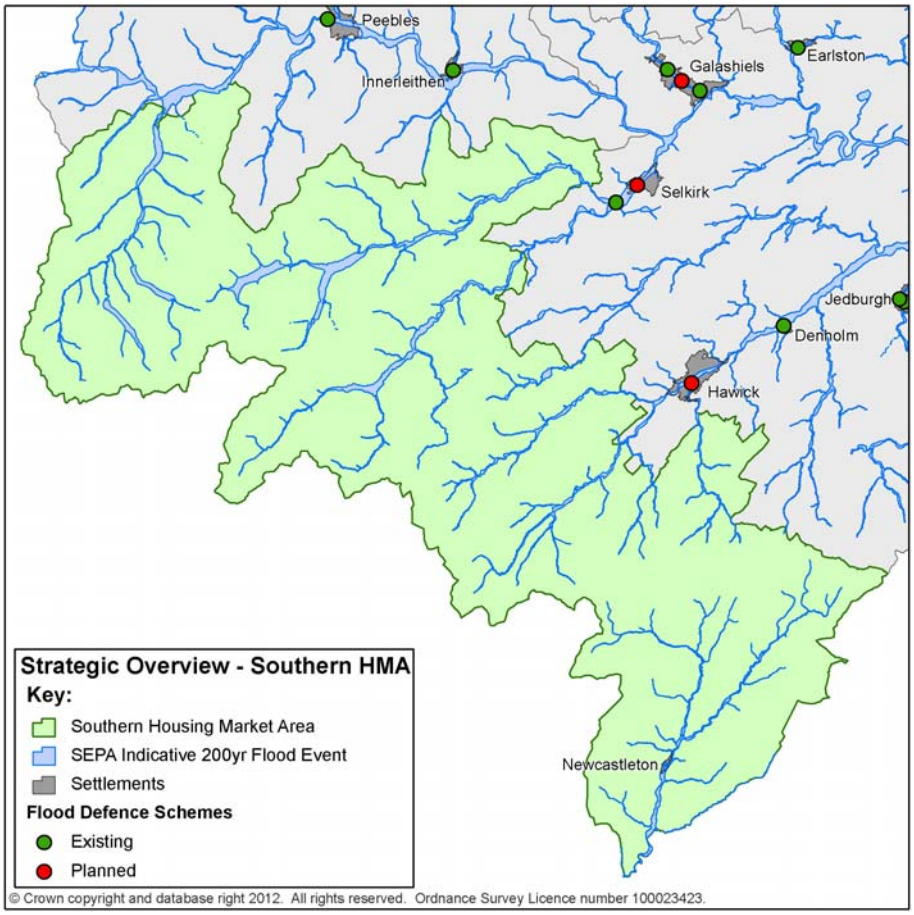
Peebles
Innerleithen
Galashiels
Earlston
Selkirk
Jedburgh
Denholm
Hawick
Newcastleton
Strategic Overview - Southern HMA
Key:
Southern Housing Market Area
SEPA Indicative 200yr Flood Event
Settlements
Flood Defence Schemes
Existing
Planned
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## Part 2: Site Assessments

## Detailed Assessment Process

The assessment process undertaken to identify suitable land for development to include in the MIR and LDP includes a desktop exercise and site visits, and where required consultation with key experts within the Council and externally, for example with stakeholders as SEPA. After the Council's assessment, the proposed sites will go through a wider consultation as part of the public consultation on the MIR.

The site assessment methodology was included in the SEA scoping report consultation with SEPA, Historic Scotland and Scottish Natural Heritage.

In the assessment of flood risk SEPA's Indicative Flood Risk Maps are used together with observations from site visits and where required comments from the Flood Protection team and SEPA.

There are a number of small watercourses not included in SEPA's Indicative Flood Risk Map. These watercourses can be the cause of flooding and will be included in the assessment of sites through site visits and detailed information from the Council's Flood Protection team.

Table 6 includes the sites assessed in the process of identifying land to include in the MIR and a commentary relating to flood risk. Map 4 is a series of maps including preferred and alternative sites intersected by or in the proximity of 1:200 flood risk.

Table 6 Land assessed for inclusion in MIR

| HMA | Proposed use | Settlement | Site reference | MIR Site Status | Flood risk | Flooding comment | Included in map 4 |
|---|---|---|---|---|---|---|---|
| BERWICKSHIRE | | | | | | | |
| | EMPLOYMENT | | | | | | |
| Berwickshire | Employment | Eyemouth | BEYEM002 | Excluded | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. Low lying area ground water may be issue. | |
| Berwickshire | Employment | Greenlaw | BGREE003 | Excluded | Not applicable | There are no flooding issues on this part of the site, although overland flow should be considered. | |
| Berwickshire | Employment | Swinton | BSWIN001 | Excluded | 1:200 | Northern half of site within 1 in 200yr flood envelope Leet Water -FRA required to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts or overland flow recommended. Low lying area ground water may be issue. | |
| | HOUSING | | | | | | |
| Berwickshire | Housing | Birgham | ABIRG002 | Excluded | Not applicable | No 100, 200, 1000 year floodrisk, however assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Birgham | ABIRG003 | Alternative | Not applicable | N/A | |

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| Berwickshire | Housing | Chirnside | ACHIR001 | Excluded | Not applicable | There is some risk of flooding in an area adjacent to the site. The site slopes down towards the River Tweed and any construction on this site could have an impact on this SAC although there is a substantial treebelt along the edge of the river. | |
| Berwickshire | Housing | Chirnside | ACHIR002 | Excluded | Not applicable | N/A | |
| Berwickshire | Housing | Cockburnspath | ACOPA003 | Excluded | Not applicable | No flood risk 1:100, 1:200 or 1:1000. Cockburnspath Burn is less than 3 sq km and there may be flood issues along the edge of the burn to the north of the site. Topographical survey and flood risk assessment may be needed to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Coldingham | ACOLH002 | Excluded | Not applicable | No flood risk 1:100, 1:200 and 1:1000. Buskin Burn is less than 3 sq km although there is no flood envelope; there may be flood issues along the edge of the burn and a flood risk assessment may be required. Assessment of flooding from road runoff, blocked culverts or overland flow is recommended. | |
| Berwickshire | Housing | Coldingham | ACOLH003 | Excluded | Not | N/A | |

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| | | | | | applicable | | |
| Berwickshire | Housing | Coldstream | ACOLD002 | Excluded | 1:200 | Although the lowest part of the site is at flood risk the vast majority of the site is not at risk, being in an elevated position in relation to the river. The site can be taken forward for further assessment. | |
| Berwickshire | Housing | Coldstream | ACOLD006 | Excluded | Not applicable | N/A | |
| Berwickshire | Housing | Coldstream | ACOLD007 | Excluded | 1:200 | Flood risk on site. North East 60% of site within 1 in 200yr flood envelope Leet Water - FRA required to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts or overland flow recommended. Low lying area ground water may be issue. | |
| Berwickshire | Housing | Duns | ADUNS009 | Excluded | Not applicable | N/A | |
| Berwickshire | Housing | Duns | ADUNS017 | Excluded | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |

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| Berwickshire | Housing | Duns | ADUNS018 | Excluded | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Duns | ADUNS019 | Excluded | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Duns | ADUNS020 | Excluded | Not applicable | Burn < 3 Sq Km no flood envelope. May be flood issues along edge of burn, FRA may be needed ment of flooding from road runoff, blocked culverts or overland flow recommended Low lying area ground water may be issue. | |
| Berwickshire | Housing | Duns | ADUNS022 | Excluded | 1:100 | Flood risk on part of the site. | |
| Berwickshire | Housing | Duns | ADUNS023 | Preferred | Not applicable | A basic FRA (topographic information in the first instance) with development layout plan will be required at a planning application stage to assess the risk of flooding. However the vast majority, if not all of the site is developable. | |
| Berwickshire | Housing | Eyemouth | AEYEM010 | Excluded | Not applicable | Site is close to a strategic transport route. Biglaw Burn < 3 Sq Km no flood envelope. May be flood issues along edge of burn, FRA may be needed. Assessment of flooding from road runoff, | |

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| | | | | | | blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Eyemouth | AEYEM009 | Excluded | Not applicable | Burn < 3 Sq Km no flood envelope. May be flood issues along edge of burn, FRA may be needed. Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Foulden | AFOUL001 | Excluded | Not applicable | N/A | |
| Berwickshire | Housing | Gavinton | AGAVI001 | Excluded | Not applicable | May be flood issues along edge of burn to North & East of site. Topographical survey and FRA may be needed to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Grantshouse | AGRAN001 | Excluded | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended Low lying area ground water may be issue. | |
| Berwickshire | Housing | Grantshouse | AGRAN002 | Excluded | Not applicable | Cast Burn < 3 Sq Km no flood envelope. May be flood issues along edge of burn, FRA may be needed. Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |

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| Berwickshire | Housing | Greenlaw | AGREE005 | Excluded | 1:100 | Although lower southern part of site is at flood risk the plans propose development on the upper part of the site out with the flood risk area. | |
| Berwickshire | Housing | Hassington | AHASS001 | Excluded | Not applicable | N/A | |
| Berwickshire | Housing | Horndean | AHORN001 | Excluded | Not applicable | N/A | |
| Berwickshire | Housing | Hutton | AHUTT001 | Excluded | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Hutton | AHUTT002 | Alternative | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Leitholm | ALEIT001 | Excluded | Not applicable | N/A | |
| Berwickshire | Housing | Paxton | APAXT003 | Excluded | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Preston | APRES003 | Excluded | Not applicable | N/A | |

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| Berwickshire | Housing | Reston | AREST001 | Preferred | Not applicable | There is a small watercourse running along the southern edge of the site. As such, there is a chance that part of this site may be at flood risk. To mitigate this risk SEPA suggest that a basic FRA (topographic information in the first instance) with development layout plan will be requierd at a planning application stage to assess the risk of flooding. The vast majority, if not all the site is developable.<br><br>SEPA also state that the same watercourse should be safeguarded and opportunity taken to enhance it as a feature of the development, and any engineering works such as culverting prohibited. In addition to this a buffer strip of min 6m and up to 12m on either side of the watercourse(s) that flows through the site should be retained (to be measured from the top of the bank). | ✓ |

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| Berwickshire | Housing | Swinton | ASWIN001 | Alternative | Not applicable | N/A | |
| Berwickshire | Housing | Westruther | AWESR006 | Preferred | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Berwickshire | Housing | Whitsome | AWHIT002 | Excluded | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| | LONG TERM MIXED USE | | | | | | |
| Berwickshire | Long Term Mixed Use | Duns | ADUNS016 | Excluded | Not applicable | N/A | |
| Berwickshire | Long Term Mixed Use | Duns | ADUNS021 | Preferred | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended. Low lying area ground water may be issue. | |
| | MIXED USE | | | | | | |
| Berwickshire | Mixed Use | Coldingham | MCOLH001 | Excluded | Not applicable | N/A | |
| Berwickshire | Mixed Use | Coldingham | MCOLH002 | Excluded | Not applicable | N/A | |

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|---|---|---|---|---|---|---|---|
| Berwickshire | Mixed Use | Greenlaw | MGREE001 | Alternative | Not applicable | N/A | ✓ |
| Berwickshire | Mixed Use | Swinton | MSWIN001 | Excluded | Not applicable | N/A | |
| | REDEVELOPMENT | | | | | | |
| Berwickshire | Redevelopment | Eyemouth | REYEM002 | Preferred | Not applicable | N/A | ✓ |
| CENTRAL BORDERS | | | | | | | |
| | HOUSING | | | | | | |
| Central | Housing | Bonchester Bridge | ABONC003 | Alternative | 1:200 | There is a small area in the north western corner of the site that is included in the 1:200 flood risk. This area would need to be excluded from development or researched further if the site was taken forward. | ✓ |
| Central | Housing | Clovenfords | ACLOV001 | Excluded | Not applicable | Although the site is acceptable in terms of the initial assessment further information on flooding and drainage is required as there has been problems with run off from the hill. | |
| Central | Housing | Clovenfords | ACLOV002 | Excluded | Not applicable | Although not included in an area of flood risk assessment of flooding from road runoff, blocked culverts or overland flow is recommended. | |

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| Central | Housing | Crailing | ACRAI002 | Excluded | Not applicable | N/A | |
| Central | Housing | Darnick | ADARN001 | Excluded | 1:200 | North East part of site and either side of Huntly Burn within 1 in 200yr flood envelope of Huntly Burn and River Tweed -FRA required to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts or overland flow recommended Low lying area ground water may be issue. | |
| Central | Housing | Denholm | ADENH001 | Excluded | Not applicable | N/A | |
| Central | Housing | Denholm | ADENH002 | Excluded | Not applicable | Although there are no initial constraints an assessment of flooding from road runoff, blocked culverts or overland flow would be recommended particularly the watercourse to the south. | |
| Central | Housing | Denholm | ADENH003 | Excluded | Not applicable | Although the site is not within 1 in 200yr flood envelope the properties to the north of this site were flooded in 1985 and the Denholm Flood Prevention Scheme was constructed which includes a screen entrance to a culvert in the north corner of the site. | |

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| Central | Housing | Denholm | ADENH004 | Excluded | 1:200 | Although no major initial constraints, the north corner is shown within the 1 in 200 yr flood envelope of the River Teviot and a topographical survey would be required to confirm accuracy of flood map. Assessment of flooding from road runoff, blocked culverts or overland flow would be recommended. | |
| Central | Housing | Denholm | ADENH005 | Excluded | Not applicable | N/A | |
| Central | Housing | Ednam | AEDNA004 | Excluded | 1:200 | There are flooding issues in southern and western parts of the site. | |
| Central | Housing | Ednam | AEDNA005 | Excluded | Not applicable | N/A | |
| Central | Housing | Ednam | AEDNA006 | Excluded | Not applicable | N/A | |
| Central | Housing | Ednam | AEDNA007 | Excluded | Not applicable | N/A | |
| Central | Housing | Earlston | AEARL004 | Excluded | 1:100 | The whole of the site is in the flood risk area. The site is within 100m of the Leader Water (Tweed SAC). Settlement is in the Primary Hub. | |

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| Central | Housing | Earlston | AEARL010 | | 1:100 | The southern half of the site is a flood risk area therefore a flood risk assessment will be required. | |
| Central | Housing | Earlston | AEARL011 | | 1:100 | Site is constrained by the SAC and flood risk at the northern edge. Site should undergo full assessment to determine acceptability. | |
| Central | Housing | Earlston | AEARL012 | Excluded | Not applicable | N/A | |
| Central | Housing | Earlston | AEARL013 | Excluded | 1:100 | N/A | |
| Central | Housing | Galashiels | AGALA025 | Excluded | Not applicable | N/A | |
| Central | Housing | Galashiels | AGALA026 | Excluded | Not applicable | The site is not within the 1 in 200yr flood envelope. The Assessment of flooding from road runoff, blocked culverts or overland flow is recommended. | |

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| Central | Housing | Galashiels | AGALA027 | Alternative | Not applicable | Not within 1 in 200yr flood envelope- Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Central | Housing | Galashiels | AGALA028 | Excluded | Not applicable | N/A | |
| Central | Housing | Galashiels | AGALA029 | Alternative | Not applicable | Flood risk area touches the southern boundary of the site but does not actually encroach the site. | ✓ |
| Central | Housing | Gattonside | AGATT001 | Excluded | Not applicable | N/A | |
| Central | Housing | Gattonside | AGATT002 | Excluded | Not applicable | N/A | |

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|---|---|---|---|---|---|---|---|
| Central | Housing | Gattonside | AGATT003 | Excluded | Not applicable | N/A | |
| Central | Housing | Gattonside | AGATT011 | Excluded | Not applicable | N/A | |
| Central | Housing | Gattonside | AGATT012 | Excluded | Not applicable | Assessment of flooding from road runoff, blocked culverts or overland flow recommended | |
| Central | Housing | Gattonside | AGATT013 | Excluded | Not applicable | Not within 1 in 200yr flood envelope- Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Central | Housing | Hawick | AHAWI014 | Excluded | Not applicable | N/A | |
| Central | Housing | Hawick | AHAWI021 | Excluded | 1:200 | The Flooding Officer advises that virtually all of the site is within the 1:200 flood envelope Slitrig Water. A FRA would be required to assess the extent of the developable ground if any. Assessment of flooding from road runoff, blocked culverts/bridges or overland flow recommended. The low lying area ground water may be an issue. | |

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| Central | Housing | Hawick | AHAWI022 | Excluded | Not applicable | The flooding officer comments that the site is not within 1 in 200 year flood envelope, however an assessment of flooding from road runoff, blocked culverts and overland flow is recommended. | |
| Central | Housing | Hawick | AHAWI023 | Alternative | Not applicable | N/A | |
| Central | Housing | Heiton | AHEIT001 | Preferred | Not applicable | N/A | |
| Central | Housing | Heiton | AHEIT002 | Preferred | Not applicable | N/A | |
| Central | Housing | Kelso | AKELS014 | Excluded | 1:100 | North/ northwestern part of the site is included in flood risk area. Areas within risk of flooding should be excluded from any housing development. The site is still considered acceptable for further assessment. | |
| Central | Housing | Kelso | AKELS015 | Excluded | Not applicable | N/A | |
| Central | Housing | Kelso | AKELS016 | Alternative | Not applicable | N/A | |
| Central | Housing | Kelso | AKELS017 | Excluded | Not applicable | N/A | |
| Central | Housing | Kelso | AKELS018 | Preferred | Not applicable | N/A | |

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|---|---|---|---|---|---|---|---|
| Central | Housing | Kelso | AKELS019 | Preferred | Not applicable | N/A | |
| Central | Housing | Kelso | AKELS020 | Excluded | Not applicable | The site is located adjacent to flood risk area/Tweed SSSI/Tweed SAC to the west but sits very high above the river on the west side. | |
| Central | Housing | Kelso | AKELS021 | Alternative | Not applicable | N/A | |
| Central | Housing | Kelso | AKELS022 | Preferred | Not applicable | N/A | |
| Central | Housing | Lanton | ALANT002 | Excluded | Not applicable | N/A | |
| Central | Housing | Melrose | AMELR001 | Excluded | Not applicable | N/A | |
| Central | Housing | Melrose | AMELR004 | Excluded | Not applicable | N/A | |
| Central | Housing | Melrose | AMELR006 | Excluded | Not applicable | N/A | |
| Central | Housing | Melrose | AMELR007 | Excluded | Not applicable | N/A | |
| Central | Housing | Melrose | AMELR008 | Excluded | Not applicable | N/A | |
| Central | Housing | Melrose | AMELR009 | Excluded | Not applicable | N/A | |
| Central | Housing | Newstead | SBNEWS001 | Preferred | Not applicable | N/A | |

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| Central | Housing | Nisbet | ANISB001 | Excluded | 1:200 | The extreme northern edge of the site is within 1 in 200yr flood envelope of unnamed burn running through the settlement but this burn is culverted most of way in village. Topographical survey recommended to assess flood risk from River Teviot and extent of developable ground. Assessment of flooding from road runoff, blocked culverts or overland flow also recommended. | |
| Central | Housing | Oxnam | AOXNA001 | Excluded | Not applicable | N/A | |
| Central | Housing | Roxburgh | AROXB001 | Excluded | Not applicable | N/A | |
| Central | Housing | Roxburgh | AROXB002 | Excluded | Not applicable | N/A | |
| Central | Housing | Sprouston | ASPRO001 | Excluded | 1:200 | 1:200year flood risk at extreme north west corner of site | |
| | LONGER TERM HOUSING | | | | | | |

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| Central | Long Term Housing | Clovenfords | SCLOV001 | Excluded | Not applicable | There are no initial constraints on the site. Although the site is not included in 1:200 flood risk assessment of flooding from road runoff, blocked culverts or overland flow is recommended. | |
| Central | Long Term Housing | Galashiels | SGALA017 | Excluded | 1:100 | 1 in 100 year flood risk on extreme eastern side. | |
| Central | Long Term Housing | Nenthorn | SNENT001 | Excluded | Not applicable | N/A | |
| | MIXED USE | | | | | | |
| Central | Mixed Use | Darnick | MDARN001 | Alternative | Not applicable | N/A | |
| Central | Mixed Use | Galashiels | MGALA004 | Excluded | Not applicable | N/A | |
| Central | Mixed Use | Jedburgh | MJEDB001 | Excluded | Not applicable | N/A | |
| Central | Mixed Use | Newstead | MNEWS001 | Excluded | Not applicable | N/A | |
| Central | Mixed Use | Newtown St Boswells | MNEWT002 | Excluded | Not applicable | N/A. | |
| Central | Mixed Use | Selkirk | MSELK001 | Excluded | Not applicable | N/A | |
| Central | Mixed Use | St Boswells | MCHAR001 | Excluded | 1:100 | N/A | |
| Central | Mixed Use | Tweedbank | MTWEE001 | Preferred | Not applicable | N/A | ✓ |
| | REDEVELOPMENT | | | | | | |

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| Central | Redevelopment | Eckford | RECKF001 | Excluded | 1:200 | Minor flooding issue on the northern parts of the site. | |
| | RETAIL | | | | | | |
| Central | Retail | Selkirk | GSELK001 | Excluded | 1:200 | The whole of the site is identified in the Halcrow, Selkirk Flood Study as a flood risk area. Site is adjacent to the Long Philipburn (Tweed SAC) and linked by it to the Ettrick (Tweed SAC). | |
| Central | Retail | Selkirk | GSELK002 | Excluded | 1:200 | Almost all of site within 1 in 100yr and 1 in 200yr flood envelope of Ettrick Water – Site is also within Halcrow flood map of area. Selkirk Flood Protection Scheme is still at consultation stage but includes this area and may be part of flood defences. | |
| NORTHERN | | | | | | | |
| | EMPLOYMENT | | | | | | |
| Northern | Employment | Peebles | BPEEB005 | Excluded | Not applicable | Linn Burn < 3 Sq Km no flood envelope. May be flood issues along edge of burn to north east of site, FRA may be needed. Assessment of flooding from road runoff, | |

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| | | | | | | blocked culverts or overland flow recommended. | |
| Northern | Employment | Peebles | BPEEB006 | Excluded | Not applicable | N/A | |
| Northern | Employment | Peebles | BPEEB007 | Excluded | 1:200 | 1:200 year flood risk in south western corner.<br>Site situated close to Eddleston Water. | |
| Northern | Employment | West Linton | BWEST002 | Excluded | 1:200 | The North East corner of the site is within 1 in 200yr flood envelope of the Lyne Water and West Water.<br>Topographical survey and FRA may be needed to determine to assess extent of developable ground.<br>Assessment of flooding from road runoff, blocked culverts and overland flow recommended. | |
| | HOUSING | | | | | | |
| Northern | Housing | Eddleston | AEDDL002 | Alternative | Not applicable | SEPA RESPONSE: Surface water runoff from the nearby hills has previously been observed. May require mittigation measures during | ✓ |

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| | | | | | | design stage. Local Authority may wish to consider any additional information they hold with regards to fluvial / coastal flooding and other sources such as pluvial, groundwater or sewer. | |
| Northern | Housing | Eddleston | AEDDL004 | Excluded | 1:200 | The site is completely within the 1:200 flood risk area. | |
| Northern | Housing | Heriot | AFALA001 | Excluded | Not applicable | Not within 1 in 200yr flood envelope- Assessment of flooding from road runoff, blocked culverts or overland flow recommended Condition of disused railway drainage system should be assessed. | |
| Northern | Housing | Innerleithen | AINNE007 | Excluded | Not applicable | N/A | |
| Northern | Housing | Nether Blainslie | ANETH001 | Excluded | Not applicable | Kitty Burn < 3 Sq Km no flood envelope. May be flood issues along edge of Kitty Burn to South of site and un named burn to North of site. Topographical survey and FRA may be needed to assess extent of developable ground.- Assessment of flooding from road runoff, blocked culverts and overland flow recommended. Well in vicinity may indicate high water table which should be checked out. | |
| Northern | Housing | Nether Blainslie | ANETH002 | Excluded | Not | N/A | |

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| | | | | | applicable | | |
| Northern | Housing | Oxton | AOXTO003 | Excluded | Not applicable | Clora Burn < 3 Sq Km no flood envelope. May be flood issues along edge of Clora Burn to North of site. Topographical survey and FRA may be needed to assess extent of developable ground.- Assessment of flooding from road runoff, blocked culverts and overland flow recommended. | |
| Northern | Housing | Oxton | AOXTO004 | Excluded | Not applicable | Not within 1 in 200yr flood envelope- Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Northern | Housing | Peebles | APEEB003 | Excluded | 1:100 | A large part of the site is within the 100 year floodrisk. The site is also affected by 1:200 flood risk to the east of the site. | |
| Northern | Housing | Peebles | APEEB015 | Excluded | Not applicable | Not within 1 in 200yr flood envelope of River Tweed. Edderston Burn < 3 Sq Km no flood envelope. The Edderston Burn has previously flooded areas at Caledonian Road and an overflow system (sluices) and by-pass channel (drain) have been installed on a tributary burn at the Western side of this site to carry excess flows to a culvert at South Parks. Machine access to this | |

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| | | | | | | overflow and channel MUST be maintained to allow for future cleaning and maintenance. Discharges to the burns and by-pass channel must be limited to Greenfield run-off to prevent flooding issues. Topographical survey and FRA may be needed. Assessment of flooding from road runoff, blocked culverts and overland flow recommended.<br>This site has been identified in the Edderston Burn Flood Study as a potential location for a flood storage area to mitigate existing floodrisk to the South Parks/ Caledonian Road.<br>Consult with Flood Team. | |
| Northern | Housing | Peebles | APEEB021 | Preferred | Not applicable | Blocked grill on Edderston Burn could flood east strip of site. May be possibility for the east corner of the site to be affected. Scope for ground raising. The channel up-stream from grill will be required to be kept clear and maintained, and free from build-up of silt. Machine access to this overflow and channel MUST be maintained to allow for future cleaning and maintenance. | ✓ |

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| | | | | | | SEPA RESPONSE: Request a flood risk assessment and a buffer strip to be included as site requirements. As well as no built development should take place on the functional flood plain or over existing culverts. | |
| Northern | Housing | Peebles | APEEB032 | Excluded | Not applicable | N/A | |
| Northern | Housing | Peebles | APEEB033 | Excluded | 1:200 | Almost 70% site within 1 in 200yr flood envelope of Eddleston Water.<br>The JBA Flood Risk Assessment in April 2008 for the Eddleston Water predicts an approximate level of about 164m AOD for a 1in 200yr flood in this vicinity. Any development in this area would need to have Finished Floor Levels about 600mm above predicted level. The adjacent site had to amend the layout to locate properties outwith the flood envelope. Assessment of flooding from road runoff, blocked culverts or overland flow recommended. There is also a risk of high water tables in the east corner of the site. Low lying area ground water may be issue. | |
| Northern | Housing | Peebles | APEEB034 | Excluded | Not applicable | Overland flow should be considered. | |

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| Northern | Housing | Peebles | APEEB035 | Excluded | Not applicable | Not within 1 in 200yr flood envelope of River Tweed. Edderston Burn < 3 Sq Km no flood envelope. The Edderston Burn has previously flooded areas at Caledonian Road and an overflow system (sluices) and by-pass channel (drain) have been installed on a tributary burn within this site to carry excess flows to a culvert at South Parks. Machine access to this overflow and channel MUST be maintained to allow for future cleaning and maintenance. Discharges to the burns and by-pass channel must be limited to Greenfield run-off to prevent flooding issues. The burn to North West of site may give rise to flooding issues. Topographical survey and FRA may be needed. Assessment of flooding from road runoff, blocked culverts and overland flow recommended. | |
| Northern | Housing | Peebles | APEEB036 | Excluded | Not applicable | Site adjacent to 1 in 200yr flood envelope Eddleston Water - FRA required to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts or overland flow recommended Low lying area ground water may be | |

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| | | | | | | issue. | |
| Northern | Housing | Peebles | APEEB037 | Excluded | Not applicable | Un-named Burn < 3 Sq Km no flood envelope. May be flood issues along edge of this burn to North West and East of site. Topographical survey and FRA may be needed to assess extent of developable ground.- Assessment of flooding from road runoff, blocked culverts and overland flow recommended. | |
| Northern | Housing | Peebles | APEEB038 | Excluded | Not applicable | Not within 1 in 200yr flood envelope- Assessment of flooding from road runoff, blocked culverts or overland flow recommended. | |
| Northern | Housing | Peebles | APEEB039 | Excluded | 1:200 | All of site within 1 in 200yr flood envelope Eddleston Water -FRA required to assess extent of developable ground if any. Assessment of flooding from road runoff, blocked culverts/bridges or overland flow recommended Low lying area ground water may be issue. | |
| Northern | Housing | Peebles | APEEB040 | Excluded | Not applicable | N/A | |
| Northern | Housing | Peebles | APEEB041 | Preferred | 1:200 | The JBA Flood Risk Assessment in April 2008 for the Eddleston Water predicts an approximate level of about 164m AOD for a 1in 200yr | ✓ |

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| | | | | | | flood in this vicinity. Any development in this area would need to have Finished Floor Levels about 600mm above predicted level. The adjacent site had to amend the layout to locate properties outwith the flood envelope. Assessment of flooding from road runoff, blocked culverts or overland flow recommended. There is also a risk of high water tables in the east corner of the site. Low lying area ground water may be issue. | |
| Northern | Housing | Stow | ASTOW025 | Excluded | 1:200 | The North West edge of the site is within 1 in 200yr flood envelope of the Cockholm Burn.<br>Topographical survey and FRA may be needed to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts and overland flow recommended. | |
| Northern | Housing | Stow | ASTOW026 | Excluded | Not applicable | N/A | |
| Northern | Housing | Thornylee | ATHOR001 | Excluded | Not applicable | Not within 1 in 200yr flood envelope of Tweed-Assessment of flooding from road runoff, blocked culverts or overland flow recommended. Proximity of pond may indicate high ground water level which | |

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|---|---|---|---|---|---|---|---|
| | | | | | | may be an issue. | |
| Northern | Housing | Thornylee | ATHOR002 | Excluded | Not applicable | Not within 1 in 200yr flood envelope of Tweed- Assessment of flooding from road runoff, blocked culverts or overland flow recommended. Proximity of pond may indicate high ground water level which may be an issue. | |
| Northern | Housing | West Linton | AWEST001 | Excluded | Not applicable | N/A | |
| Northern | Housing | West Linton | AWEST011 | Excluded | Not applicable | Flood Risk from Dean Burn Overland flow should be considered | |
| Northern | Housing | West Linton | AWEST012 | Excluded | 1:200 | The East corner of the site is within 1 in 200yr flood envelope of the Cairn Burn. Topographical survey and FRA may be needed to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts and overland flow recommended. Low lying area ground water may be issue. | |
| Northern | Housing | West Linton | AWEST013 | Excluded | 1:200 | A very small proportion of the site sits within the 200 year floodrisk. | |

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|---|---|---|---|---|---|---|---|
| Northern | Housing | West Linton | AWEST014 | Excluded | 1:200 | The South corner of the site is within 1 in 200yr flood envelope of the Lyne Water. Topographical survey and FRA may be needed to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts and overland flow recommended. Low lying area ground water may be issue. | |
| | MIXED USE | | | | | | |
| Northern | Mixed Use | Cardrona | MCARD004 | Excluded | Not applicable | N/A | |
| Northern | Mixed Use | Cardrona | MCARD005 | Excluded | 1:100 | River Tweed flows adjacent to site. 1:100 floodrisk on edges of site. | |
| Northern | Mixed Use | Cardrona | MCARD006 | Preferred | 1:200 | River Tweed flows adjacent to site. 1:200 floodrisk on south-eastern portion of site. | ✓ |
| Northern | Mixed Use | Cardrona | MCARD007 | Preferred | 1:200 | River Tweed flows adjacent to site. 1:200 floodrisk on large part of site. Flood risk assessment required. | ✓ |
| Northern | Mixed Use | Peebles | MPEEB002 | Excluded | Not applicable | Not within 1 in 200yr flood envelope of River Tweed. Edderston Burn < 3 Sq Km no flood envelope. The Edderston Burn has previously flooded areas at Caledonian Road and an overflow system (sluices) and by-pass channel (drain) | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | have been installed on a tributary burn within this site to carry excess flows to a culvert at South Parks. Machine access to this overflow and channel MUST be maintained to allow for future cleaning and maintenance. Discharges to the burn and by-pass channel must be limited to Greenfield run-off to prevent flooding issues. Topographical survey and FRA may be needed to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts and overland flow recommended. | |
| Northern | Mixed Use | Peebles | MPEEB003 | Excluded | 1:200 | Almost all of site within 1 in 200yr flood envelope of River Tweed.<br>The MWH 2006 Flood Study shows the Northern corner of the site affected by a 1 in 10 year flood and all but the South Western edge in the flood envelope of a 1 in 25 year flood. The predicted flood levels for the northern part of the site provided in this report are from 158.09m to 157.78m AOD. | |
| Northern | Mixed Use | Peebles | MPEEB004 | Preferred | 1:200 | The east corner of site is within 1 in 200yr flood envelope of River Tweed and South East corner in 1 in 200yr flood | ✓ |

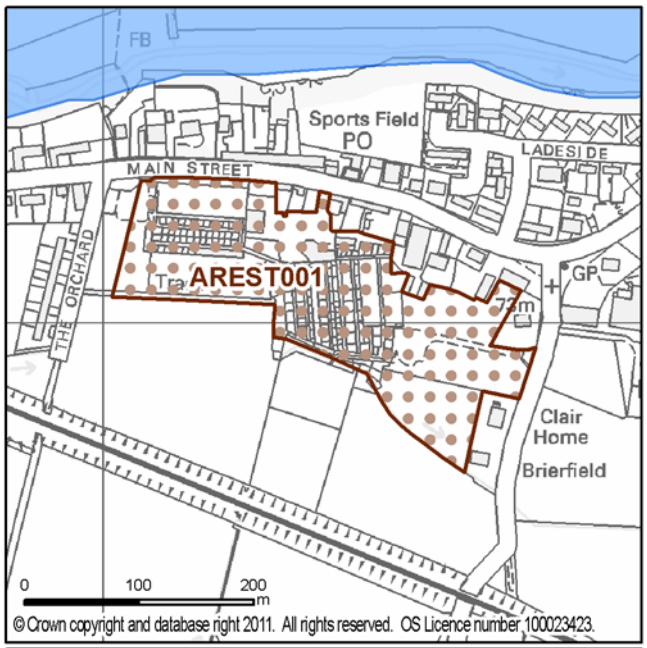
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | envelope of Haystoun Burn. The MWH 2006 Flood Study did not extend to this part of Peebles. Topographical survey and FRA may be needed to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts and overland flow recommended.<br><br>A large part of the site is within the 100 year floodrisk. The site is also affected by 1:200 flood risk to the east of the site.<br><br>SEPA RESPONSE : Request a Flood Risk Assessment to inform the development of the site and a watercourse buffer strip to be included in list of site requirements. | |
| Northern | Mixed Use | Stow | MSTOW003 | Excluded | 1:200 | The part of the site either side of the Cockholm Burn is within 1 in 200yr flood envelope. Topographical survey and FRA may be needed to assess extent of developable ground. Assessment of flooding from road runoff, blocked culverts and overland flow recommended. | |

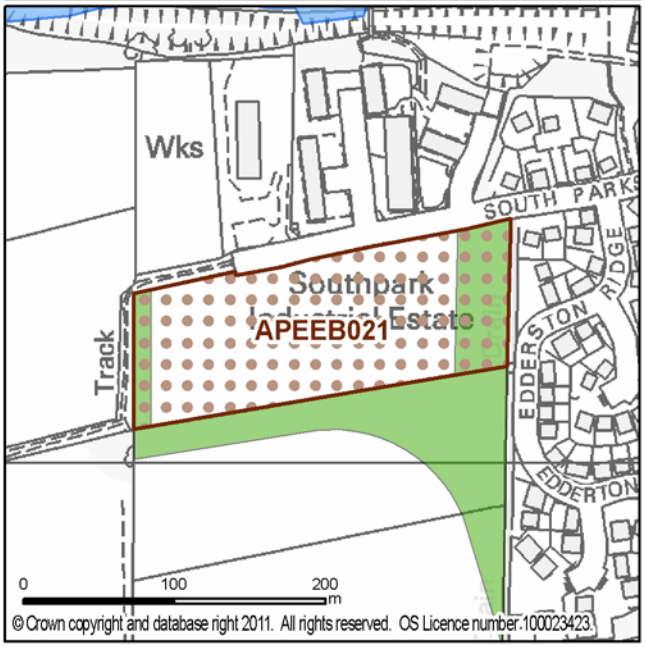
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SOUTHERN | | | | | | | |
| | HOUSING | | | | | | |
| Southern | Housing | Newcastleton | ANEWC001 | Excluded | 1:200 | There is a flooding constraint on the site, 1:100 flood risk. The site can be reassessed for development after further work to alleviate flood risk has been undertaken in the future. | |
| Southern | Housing | Newcastleton | ANEWC011 | Excluded | 1:200 | There is a flooding constraint on the site, 1:100 flood risk. The entire site is within the 1:100 flood envelope. The site can be reassessed for development after further work to alleviate flood risk has been undertaken in the future. | |

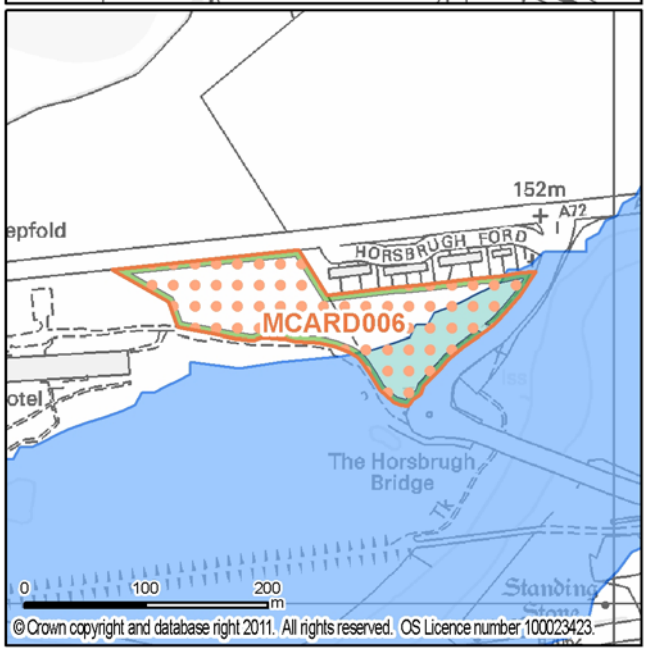
Map 4 Assessed sites that intersect or are in proximity of 1:200 flood risk

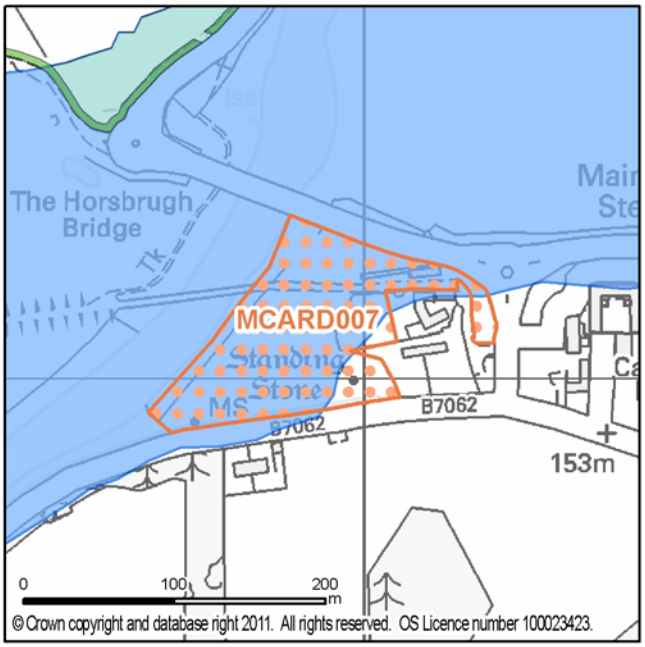
Where there are potential flood risk shown on the site it is intended to undertake a flood risk assessment in order to identify land for development free of flood risk.

**Preferred sites**


The Horsbrugh Bridge
MCARD007
Standing Stone
MS
B7062
B7062
153m
0
100
200
m
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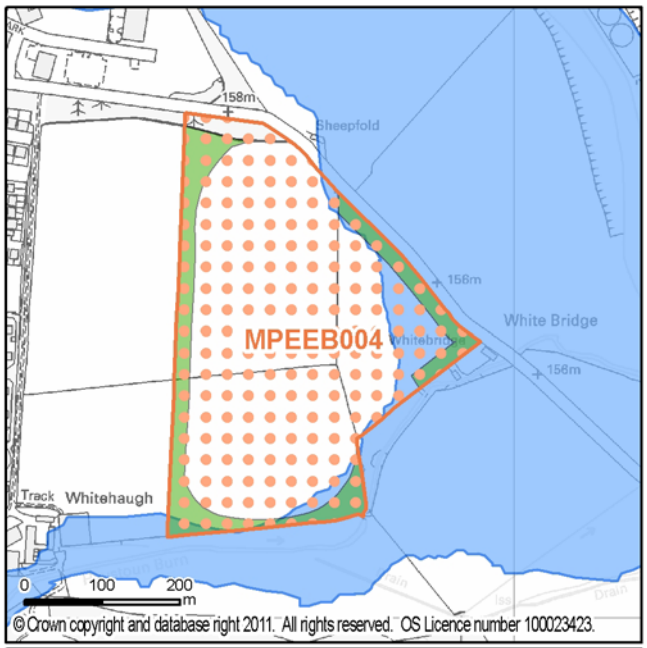
158m
Sheepfold
MPEEB004
158m
White Bridge
156m
Track
Whitehaugh
0
100
200
m
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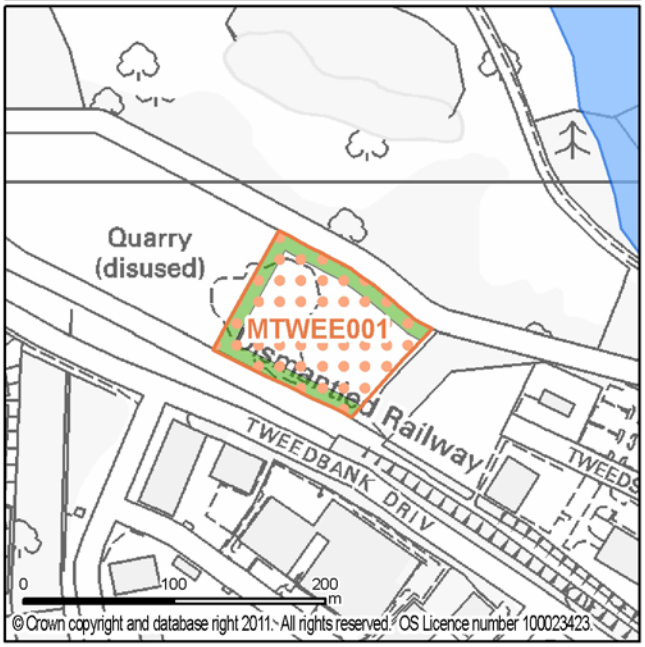
Quarry (disused)
MTWEE001
Railway
TWEEDBANK DRIV
0
100
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Pol Sta
PW
Hospl
COLDINGHAM ROAD
26m
24m
PWs
11m
Cemetery
REYEM002
Reservoir (covered)
TOLL BRIDGE ROAD
VICTORIA ROAD
A1107
B6355
GILLSLAND
0
100
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**Alternative sites**