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Additional information:

To be read in conjunction with Report to East Lothian Council dated 29 May 2018, titled East Lothian Local Development Plan

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# 2018 local development plan

strategic flood risk assessment



## **Introduction**

The Strategic Flood Risk Assessment (SFRA) informs the preparation of a Local Development Plan (LDP) for the East Lothian Council area. The assessment collates information on sources of flooding in East Lothian, identifies the key purposes of using this information and makes assessment relevant to the LDP process.

The SFRA is required to provide a strategic overview of flood risk in the LDP area and in this support the identification of the areas most appropriate for development and those that should be safeguarded to secure sustainable flood management. The SFRA has been developed in consultation with the Scottish Environment Protection Agency (SEPA) and the Council's Flooding team.

This version of the SFRA incorporates Annex 1 setting out the recommended post-examination modifications to LDP1.

## **Aims and Objectives**

The primary aim of the SFRA is to guide development away from areas of flood risk, with due consideration of coastal, fluvial (river) or pluvial (surface water) sources. Its objectives are: identify areas of flood risk based on Scottish Planning Policy's Risk Framework; provide an evidence baseline for the Environmental Assessment to inform the LDP; and to ensure development avoids areas of flood risk and does not result in flooding elsewhere.

## **Legislation**

The Flood Risk Management (Scotland) Act 2009 sets in place a statutory framework for delivering a plan-led, catchment based, sustainable and risk-based approach to managing flooding. This includes the preparation of assessments of the likelihood and impacts of flooding, and catchment based plans to address these impacts. Following completion by SEPA of its Flood Risk Management Strategy (FRMS), the Local Flood Risk Management Plan (LFRMP) for the Forth Estuary Local Plan District (FELPD) was published by the Responsible Authorities in the FELPD in June 2016. The LFRMP will identify Objectives and Actions to manage flooding due to coastal, fluvial (river) or pluvial (surface water) sources.

The Flood Hazard Maps published by SEPA provide councils and their planners a good framework indicating areas where flood risk management will either be required, further information sought, or the land will be assessed as not suitable for development. The Flood Risk Management Strategy and the Local Flood Risk Management Plan inform the Development Planning process. This Strategic Flood Risk Assessment provides an overview of flood risk from all sources in East Lothian.

## Planning Policy

With regard to the Flood Risk Management (Scotland ) Act 2009 and the Climate Change (Scotland ) Act 2009, the National Planning Framework 3 (NPF3) emphasises the importance of national and local strategies and plans for flood risk management. NPF3 requires that Scottish Planning Policy (SPP) addresses matters of flooding and drainage.

SPP (2014) requires that development is located away from the functional flood plain and from areas of medium to high flood risk. Strategic Flood Risk Assessments should be used to inform choices about the location of development, such as the allocation of sites. LDPs should use the SPP Flood Risk Framework to assess what type of land is suitable for what type of development within areas of differing degrees of flood risk. Table 1 below shows the SPP Risk Framework indicating the return period and probability associated with the river and coastal flooding.

<b>Little or No Risk</b>	Annual probability of coastal or watercourse flooding is less than 0.1% (1:1000 years)  – No constraints due to coastal or watercourse flooding.
<b>Low to Medium Risk</b>	Annual probability of coastal or watercourse flooding is between 0.1% and 0.5% (1:1000 to 1:200 years)  – 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%), and for essential infrastructure and the most vulnerable uses. Water resistant materials and construction may be required.  – Generally not suitable for civil infrastructure. Where civil infrastructure must be located in these areas or is being substantially extended, it should be designed to be capable of remaining operational and accessible during extreme flood events.

<p><b>Medium to High Risk</b></p>	<p>Annual probability of coastal or watercourse flooding is greater than 0.5% (1:200 years)</p> <p>May be suitable for:</p> <ul style="list-style-type: none"> <li>– residential, institutional, commercial and industrial development within built-up areas provided flood protection measures to the appropriate standard already exist and are maintained, are under construction, or are a planned measure in a current flood risk management plan;</li> <li>– essential infrastructure within built-up areas, designed and constructed to remain operational during floods and not impede water flow;</li> <li>– some recreational, sport, amenity and nature conservation uses, provided appropriate evacuation procedures are in place; and</li> <li>– job-related accommodation, e.g. for caretakers or operational staff.</li> </ul> <p>Generally <b>not</b> suitable for:</p> <ul style="list-style-type: none"> <li>– civil infrastructure and the most vulnerable uses;</li> <li>– additional development in undeveloped and sparsely developed areas, unless a location is essential for operational reasons, e.g. for navigation and water-based recreation, agriculture, transport or utilities infrastructure (which should be designed and constructed to be operational during floods and not impede water flow), and an alternative, lower risk location is not available; and</li> <li>– new caravan and camping sites.</li> </ul> <p>Where built development is permitted, measures to protect against or manage flood risk will be required and any loss of flood storage capacity mitigated to achieve a neutral or better outcome.</p> <p>Water-resistant materials and construction should be used where appropriate. Elevated buildings on structures such as stilts are unlikely to be acceptable.</p>
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Table 1 Risk Framework (Scottish Planning Policy June 2014)

Further guidance is given in the Scottish Government’s online planning advice on flood risk (replacing PAN 69) and SEPA’s Land Use Vulnerability Guidance in relation to flood risk.

## Local Flood Risk Management Plan

Several towns and communities in East Lothian have a history of, and continue to be at risk from, flooding. Flooding comes in three main forms: river, surface water, and coastal. River and surface water flooding are caused by heavy rain or snowfall, or snowmelt, while coastal flooding is caused by extreme tides, storm induced waves or sea surges, sometimes in combination with each other. Localised flooding around watercourses can also be caused by blockages such as a build-up of debris, fallen trees, or the deliberate dumping of material.

Other factors include groundwater, sewer surcharging and infrastructure failure can contribute to flooding.

SEPA's National Flood Risk Assessment (NFRA) identified Potentially Vulnerable Areas (PVA) – areas of potentially significant flood risk. The NFRA informed SEPA's Flood Risk Management Strategy (FRMS), which in turn informed the Local Flood Risk Management Plan (LFRMP). The LFRMP considers the PVAs (for East Lothian, Musselburgh, Cockenzie and Port Seton, Longniddry and Prestonpans, Haddington, Dunbar and West Barns) in terms of flooding criteria, including whether or not there are flood protection schemes/works, flood warnings, studies etc. (see Table 4 of Appendix 2). It presents actions for the avoidance and reduction of the risk of flooding to our communities. It includes for Flood Protection Schemes proposed for Musselburgh in respect of flood risk from the River Esk and tidal surges, and for Haddington to reduce flood risk from the River Tyne. Flood risk studies are proposed for other PVAs. A Surface Water Management Plan (SWIMP) will also be produced to set objectives for the management of surface water flood risk and identify the most sustainable actions to achieve this. It will incorporate outputs from Scottish Water's ongoing Integrated Catchment Studies.

### *Indicative River (fluvial), Coastal and Surface Water Flood Maps*

The map overleaf shows the areas in East Lothian identified by SEPA as being at medium to high risk (>0.5% or 1 in 200 years) of fluvial, coastal and surface water flooding.

SEPA's surface water flood mapping is based on combined information from rainfall and sewer model outputs, incorporating data from a national surface water study, a regional surface water study with increased resolution in selected areas and a Scottish Water sewer flooding assessment.

SEPA also advises that where the information was readily available the mapping takes account of flood prevention schemes and coastal defences and the effect that bridges and other structures such as culverts may have on a flood.

Fluvial flood mapping by SEPA has not assessed the risk of flooding from watercourses with catchments of less than 3km<sup>2</sup> and the coastal flood mapping does not take account of the potential effects of wave action, funnelling or local bathymetry.

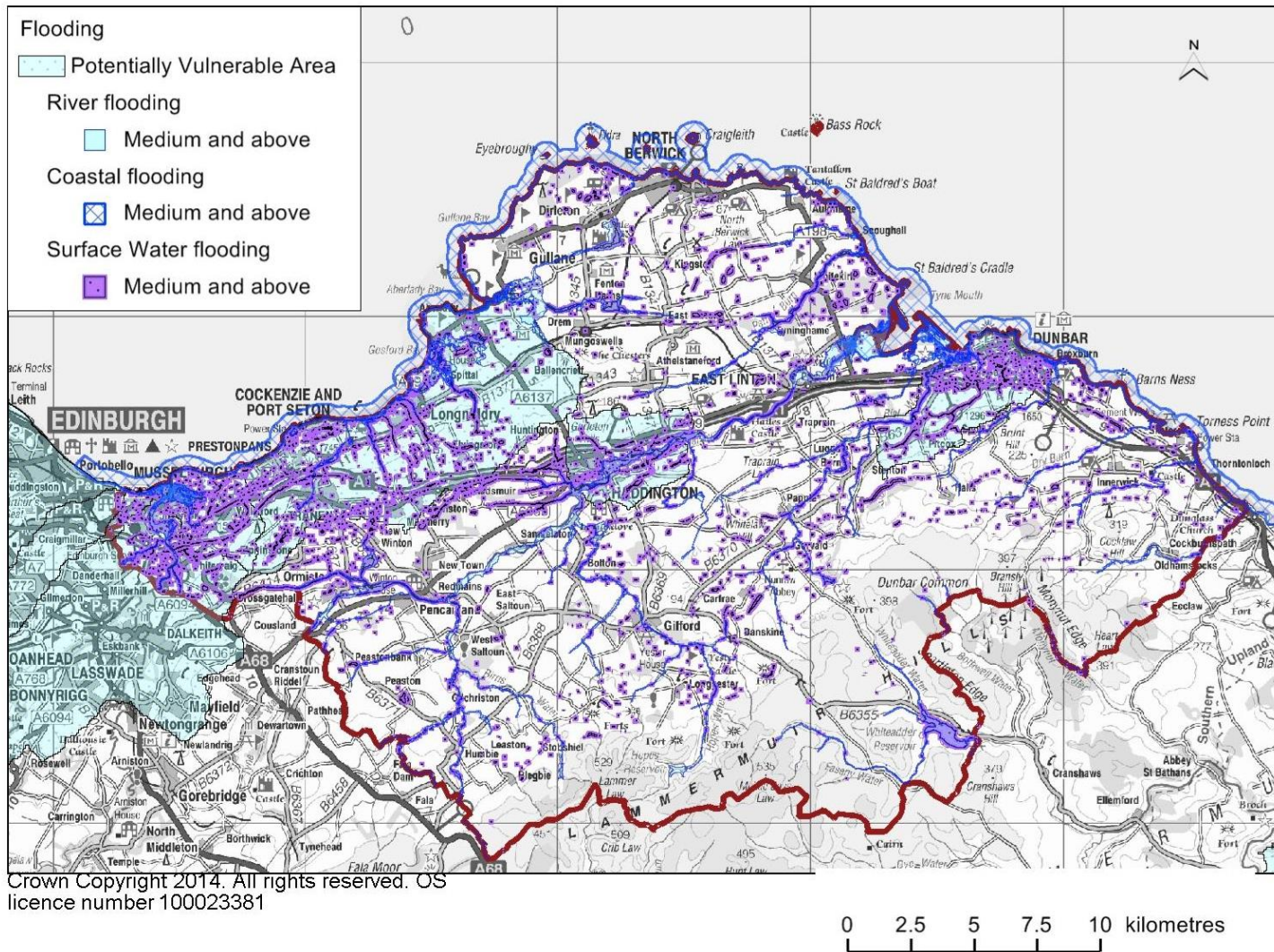


Figure 1: Flood Risk



PVAs are identified by SEPA as areas where the potential impact from flooding is sufficient to justify further assessment and appraisal of Flood Risk Management actions. It is important to note that not all properties within a PVA are at risk of flooding. The PVAs show the areas where flooding is a strategic issue, and aims to help focus work on flood prevention. This information is not appropriate for assessing whether an individual site or property is liable to flooding.

SEPA identified flood risk for each of the PVAs as part of its Flood Risk Management Strategy.

Appendix 1 is an extract of the FRMS for the East Lothian PVAs.

Appendix 2 is an extract of the LFRMP for the East Lothian PVAs.

## **History**

Recognised river flood risk exists in Haddington, Musselburgh and West Barns, from the Tyne, Esk and Biel Burn respectively. River flooding has been a longstanding problem at the Tyne in Haddington, with floods in 1931, 1948, 1956 and 1984 causing considerable damage to land and properties, with property in East Linton also suffering damage. Thin soil levels and a lack of woodland cover in the Lammermuir hills are likely to increase the rate of runoff in the catchment area, increasing the risk of the river flooding. The Biel is also prone to flooding, and the Council has installed stone gabions to reduce the risk of flooding at West Barns. Musselburgh has also suffered flooding from the Esk, affecting low-lying properties near the river. Property alongside watercourses elsewhere is also liable to flooding during periods of high rainfall and properties in Pencaitland and Ormiston have also suffered flood damage in the past.

Coastal flooding has also been a problem. The towns of Musselburgh, Prestonpans, Cockenzie/Port Seton, North Berwick and Dunbar are located on the coast. There were severe winter storms in 2010 and 2012, causing the flooding of harbours with a storm in 2012 causing £90,000 of damage to North Berwick Harbour as sea defences were overtopped and harbour infrastructure damaged. This problem could get worse in the future, as winds from the north east have become more common, increasing the size and power of waves as they arrive onshore. Sea level rise also increases the probability of flooding on the coast.

A key cause of flooding in East Lothian is from surface water runoff from agricultural land. Heavy and intense rainfall during storms can lead to a high degree of surface water runoff, especially when the ground is already saturated, endangering communities and infrastructure. A storm in June 2012 caused extensive problems with the North Berwick railway branch line being closed, as well as a number of roads. Surface water affected Musselburgh, Tranent, Macmerry, Prestonpans and the A1, causing severe disruption to traffic.

High groundwater levels have caused flooding to property basements in east Musselburgh.

Historical development on the floodplain and in coastal areas (sometimes unavoidably, for example harbours) has over time increased the risk of losses caused by flooding.

### *Existing Flood Defences*

SEPA only class as acceptable for consideration in relation to land use planning only formal flood protection schemes designed to protect for the 0.5% annual probability flood, in line with SPP.

Formal flood defences in East Lothian are limited to a short section of sea wall at Prestonpans. This was installed as part of the Prestonpans Flood Prevention Scheme 1972. There is no standard for protection (SOP) associated with this scheme. It is a concrete wall with curved wave deflector and masonry wall of engineering brick construction. There are other defences that front the coastline, however they usually comprise of poorly constructed masonry walls and are generally in poor condition.

In the 1950s, the Ministry of Agriculture built a series of flood banks along the sides of some rivers in East Lothian with the primary intention of protecting agricultural land from flooding. These appeared to be constructed to a height of a modest flood with annual exceedance probability of around 0.4% (1 in 25 years).

### *River Tyne*

After a major flood in 1927, a flood wall was erected along the river bank at Gifford Gate in Haddington to protect the Nungate area from periodic flooding. Over the years this wall has successfully reduced the severity of flooding and this wall was 'overtopped' only under very high river levels (1948, 1956 and 1990).

A flood mitigation scheme was implemented in Haddington as part of the redevelopment of the former Simpsons Maltings for housing in 2005. Ground levels were raised, an embankment was constructed at the west end of the site and the sluice gate at the inlet to the Mill Lade was modified. These measures reduced the risk of flooding on the site to acceptable levels.

Several studies have been commissioned in the past to study the River Tyne in detail and to propose the extent of engineering works required to mitigate flooding in the low lying areas of Haddington. The most recent is the Haddington Flood Study 2009 undertaken by Jacobs Engineering UK Ltd. The study was intended to assist with the determination of planning applications on the functional flood plain, identifying property at risk and reviewing the present Emergency Flood Plan for Haddington, and to assist in the design of proposed flood defences which will be constructed to protect low lying areas of the town that are at risk from flooding. The length of the river considered relevant to the study extends from West Mains Farm at Samuelston to the Abbey Bridge, a distance of 5.5 miles. The study includes a set of drawings that provides information on the indicative extent of inundation for a range of return period flood events.

Flood Mitigation Measures for Haddington are under consideration and are included within the LFRMP and assessed via standard economic and environmental criteria. This scheme is included in SEPA's FRMS Prioritisation List.

### *River Esk*

Musselburgh has not been subjected to flooding from the River Esk to the same degree as Haddington from the Tyne, however the 1948 flood was a major event. Flooding in Musselburgh is of particular concern, however, as parts of the town are also at risk from coastal flooding. When high tides and surges combine with a high river flow large areas of the town are at risk with little or no defence.

River training walls have been erected along the banks of the river but when high river flows encounter a high tide this causes localised flooding where the height of the training walls is inadequate.

The Council commissioned Jacobs Engineering UK Ltd to produce the River Esk Flood Study 2012. This findings of this study will assist with the determination of planning applications on the functional flood plain, identifying property at risk, with reviewing the present Emergency Flood Plan for Musselburgh, and with the design of proposed flood defences that will be constructed to protect areas of the town that are at risk from flooding.

Flood Mitigation Measures for Musselburgh previously under consideration have led to an Options Appraisal and a flood protection scheme has been included within the LFRMP. This scheme is included in SEPA's FRMS Prioritisation List.

Midlothian is working on proposals for the upstream areas of the River Esk and cross-boundary work will be required to maximise the potential benefits.

### *Biel Water*

The Biel Water has a history of flooding in West Barns. The Council's Biannual Reports on Flooding report that gravel and sand banks are removed annually or as required downstream of the Edinburgh Road Bridge at West Barns to mitigate flooding. A further flood study for the Biel Water is included for within the LFRMP; this will include consideration of flood issues in West Barns.

### **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**

East Lothian Council seeks to achieve more sustainable solutions for flood protection schemes and is working with relevant agencies on this, to help establish

suitable, beneficial and evidenced measures for natural flood management. Upstream flood storage for the River Tyne is a potential contributor to reducing flood risk in Haddington and it is proposed to carry out a Natural Flood Management study to assess whether or not wave attenuation could help reduce coastal flood risk for Musselburgh.

## **Climate Change**

In applying an allowance for climate change and freeboard, the Council would expect to apply the most up-to-date guidance from SEPA. At present, the Council would firstly refer to SEPAs current Planning Information Note 3: Flood Risk Advice for Planning Authorities. Under the development management section the document states that where a flood risk assessment is required, SEPAs Technical Flood Risk Guidance for Stakeholders (June 2015) should be used. The current technical guidance (at the time of writing) recommends a current climate change allowance of +20% and a minimum freeboard allowance of 600mm (where the development includes any overnight accommodation). This guidance is however currently being reviewed by SEPA. Climate change figures should reflect best science and we would recommend referring to UKCP09 (soon to be replaced with UKCP18 and may be subject to further review). Further guidance for Local Authorities from SEPA on climate change and freeboard allowance is due to emerge later in 2018.

Studies are ongoing which are likely to suggest increases in these figures and the council would take cognisance of SEPAs recommendations in any amended technical guidance notes. SEPA is currently considering whether to alter its guidance to reflect the results of the “UK Water Industry Research project – Rainfall Intensity for Sewer Design”. If SEPA does update its guidance, for this or any other reason, the Council would expect to use the updated guidance.

The sources of the information set out above can be found in the following sections of the Technical Flood Risk Guidance for Stakeholders (June 2015):

- Climate Change Allowance: Paragraph 4.4, Page 11
- Freeboard Allowance: Paragraph 4.5.1, Page 14

## **Strategic Overview**

A key objective of the Proposed LDP is to direct development, particularly vulnerable uses, away from areas of flood risk to appropriate locations, and to design new development so it will be resilient to the effects of climate change and helps to reduce or avoid flood risk. This objective is pursued through the site assessment process informed by SPP, SEPA flood maps and the LFRMP. Table X below presents the relevant site assessment summary.

## Site Assessments

The assessments made of sites as part of the LDP process of identifying appropriate sites for development included desktop studies, site visits and consultation with relevant internal and external consultees. The methodology for site assessment was included in the SEA process which accompanied the MIR consultation, which included statutory consultees including SEPA.

The assessment of flood risk derives from SEPA's Indicative Flood Risk Maps with input from SEPA and the Council's Flooding team to give additional localised information on historical and current issues and for where the SEPA mapping does not cover smaller watercourses.

STRATEGIC FLOOD RISK ASSESSMENT – EAST LOTHIAN LOCAL DEVELOPMENT PLAN (includes reference to all expressions of interest sites and ELLP sites being rolled forward).

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
<b>MUSSELBURGH</b>						
<b>PROP MH1</b> (Pref – M1)	Yes	Land at Craighall	Housing and Employment  1200	Surface Water / fluvial – small part	IER has identified the requirement for a FRA. The FRA should take into consideration culverts adjacent to the site. SEPA maintain a gauging station on the development site. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
<b>PROP MH2</b>	Yes	Land at Old Craighall Village (Old Craighall	Housing - 50	Surface Water - part	The flood risk from surface water including run-off from adjoining land should be assessed.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
(PREF - MH3a)		east)				
<b>PROP MH2</b> (PREF-M3b)	Yes	Land at Old Craighall Village (Old Craighall east)	Housing 50 in MIR; larger submission made	Surface Water – part	The flood risk from surface water including run-off from adjoining land should be assessed.	No
<b>PROP MH3</b> (Pref M2)	Yes	Land at Old Craighall Village	Employment	Surface Water / fluvial – small part	IER has identified the requirement for a FRA. The FRA should take into consideration culverts adjacent to the site. SEPA maintain a gauging station just upstream of the development site. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
<b>PROP MH5</b> PREF-M6)	Yes	Former Edenhall Hospital Site	Housing - 100	Surface Water /fluvial – small part	A tributary from of the Pinkie Burn is believed to flow through the site as shown on the SEPA fluvial flood map. A FRA was carried out by Ironside Farrar in April 2010 and identified that a 600mm diameter emerges at Pinkie St Peter's Primary School. The exact location of the culvert upstream is unknown. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
<b>PROP MH7</b>	Yes	Pinkie Mains	Housing - 130	Surface Water –	A FRA was carried out as part of the Pinkie Mains development by Kaya Consulting dated	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
(Pref M7)		Intensification		small part	14th Feb 2008 and did not identify the area shown on the SEPA flood map to be at risk of flooding. IER has identified this source of flooding and highlights that a DIA may be required. The flood risk from surface water including run-off from adjoining land should be assessed.	
<b>PROP MH8</b> (PREF-M8)	Yes	Levenhall	Housing – 65	Surface Water – small part	<p>Two source of fluvial flood risk including the Ravenshaugh Burn and also the unnamed watercourse flowing through the development site. A number of culverts within the site and redevelopment of this site offers the opportunity to open up the culverts to a natural channel on the condition that flood risk is not increased downstream.</p> <p>During high flows, there are recorded instances of the Ravenshaugh Burn flooding adjacent to Beggars Bush House where the burn joins with an unnamed tributary and was culverted into small pipes. The culverts have been replaced with a large open channel. The flood risk from surface water</p>	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					including run-off from adjoining land should be assessed as part of the FRA.	
<b>PROP MH9</b> (PREF-MH13)	Yes	Land at Wallyford	350 beyond existing permission of 1050	No	SEPA provided significant input as part of the planning application and offered no objection on grounds of flood risk.	No
<b>PROP MH12</b> (PREF-M12)	Yes	Barbachlaw	Housing led mixed use - 94	Surface Water – small part Yes	The IER assess the risk to a larger allocation than the shape file representing PREF-M12 but acknowledges the surface water flood risk (but also highlights fluvial risk as the allocation in the IER is larger). The flood risk from surface water including run-off from adjoining land should be assessed.	No
OTH-M14 Site removed from LDP at EiP	No	Howe Mire	Housing led mixed use -170	Surface Water / fluvial – small part Yes	The IER has identified the risk of surface water flooding and fluvial flooding. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
<b>PROP MH14</b>	Yes	Land at Whitecraig	Housing 300	Surface Water – small part	Possibility of a culverted watercourse flowing along the northern boundary adjacent to the	Yes



Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
(PREF-M4)		South			<p>School and FRA required to assess the risk from this if present.</p> <p>FRA was carried out for development of Whitecraig Avenue which shows that the culverted watercourse location is not within the site boundary at the eastern part of the allocation. No information is available regarding the full route of the culvert.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.</p>	
<b>Prop MH15</b> (ALT-M5)	Alternative	Whitecraig North	Housing - 200	Surface Water – small part Yes	The IER assess the risk to a larger allocation than the shape file representing ALT-M5 but acknowledges the surface water flood risk. Site lies sufficiently above the risk of flooding from the Esk. The flood risk from surface water including run-off from adjoining land should be assessed.	No
PREF- M9	Yes	Goshen	Housing Led mixed use - 1200	Surface Water – small part	FRA was carried out in 2011 and showed that there was limited fluvial flood risk. No assessment was undertaken to assess the risk of pluvial flooding. A revised FRA would have to be undertaken to ensure that all sources of flood risk were assessed including surface	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					water run-off from adjoining land. Earlier discussions focused on the opening of the culverts, a revised FRA would have to assess the likely impacts of this as the earlier FRA did not look at this. The IER highlights that a FRA is required.	
PREF-M10	Yes	Drummohr (safeguard circa 100 homes)	Housing - 100		N/A	No
MIR/MH/HSG119	No	Land rear of 8/9 Carberry Close, Inveresk	Domestic Garden – removal of greenbelt	Surface Water - small part	Use of the site as garden ground for existing development would not be likely to be significantly affected by any flooding. The flood risk from surface water including run-off from adjoining land should be assessed.	No
MIR/MH/HSG129	No	Eskfield Cottages, Wallyford	Housing		The site is not known to be at risk of flooding.	No
MIR/MH/HSG133	No	The Loan, Musselburgh	Housing	Surface Water - small part	The flood risk from surface water including run-off from adjoining land should be assessed.	No
MIR/MH/OTH011	No	Land east of Wallyford Toll	Inclusion within settlement	Surface Water	SEPA advises that there is surface water issues adjacent to the site and it would	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
			boundary or allocation for redevelopment		require a Flood Risk Assessment to examine the risk from the Ravenshaugh Burn, which flows along the eastern boundary of the site. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA. The developable area and/or development type may be constrained due to flood risk.	
PM/MH/HGS041	Yes	Monktonhall	Housing – 12	Yes	<p>The majority of the site is in an area of flood risk adjacent to the River Esk, as identified in SEPA’s flood maps. There is also a small watercourse within the site. A previous FRA demonstrated that virtually the entire site with existing ground levels is inundated during a 1 in 200 year event.</p> <p>1990 records indicate that a small compound located adjacent to the south-east boundary of the site flooded up to a depth of approximately 1 metre.</p>	FRA if the site’s development should differ from the previously approved application.
PM/MH/HSG031	No	Land adjacent to Edenhall Hospital,	Housing 300	Surface water	There is an area of river and surface flood risk running through the site directly to the south of Edenhall Hospital according to SEPA’s flood	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
		Inveresk			maps. The flood risk from surface water including run-off from adjoining land should be assessed.	
PM/MH/BUS009	No	Westpans	Employment		There is no river, surface or coastal flooding on the site.  SEPA advises that it would require a FRA to assess the flood risk from the Ravenshaugh Burn and tributary adjacent to the site.	Yes
PM/MH/HSG042	No	Land at Salters Road	Housing - 46		The site is not in an area of known flood risk.	No
PM/MH/BUS002	No	Land at Old Craighall Junction Musselburgh	Business	Surface Water / fluvial – small part	Parts of the site are at risk of flooding from the burn which flows through the site. A FRA would be required to assess the flood risk from the burn as well as drains that flow along the northern boundary. Consideration should be given to upstream/ downstream culverts which may exacerbate flood risk. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
<b>PRESTONPANS</b>						
<b>PROP EGT1</b> (PREF-P1)	Yes	Cockenzie Power Station	Mixed use	Surface Water / fluvial/ coastal-small part	The level of detailed required within the FRA will depend on the location of any proposed development. The predicted 200 year still water level is 3.96mAOD. A FRA was undertaken for a residential development off Avenue Road which was at risk of surface water flooding. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
<b>PROP PS1</b> (ALT-P2)	Alternative	Longniddry South	Housing led mixed use	Surface Water – small part	Flooding issues on Seton Burn and Seton Dean Burn but not relevant to site. FRA required to assess the risk from small watercourse and take account of any changes in hydrology as a result of the mine workings. The IER clearly identifies the risks of flooding to the site. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
MIR/PP/HSG126 (north) and MIR/PP/HSG127 (south)	No	Land at Seton Mains	Housing - 2-4	Surface Water – south side	The north site is not known to be at risk of surface or river flooding. The south site is at medium risk of surface water flooding. SEPA make no comment on the north site but comment on the south side that there are flooding issues on the Seton Dean Burn from poorly designed culverts. The flood risk from surface water including run-off from adjoining land should be	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					assessed.	
MIR/PP/OTH018	No	Land east of Wallyford Toll	Holiday accommodation	Surface Water – small part	SEPA advises that a Flood Risk Assessment would be required, which should assess the risk from the Ravenshaugh Burn on the western boundary of the site. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
MIR/PP/OTH030	No	Land at Dolphingstone Farm	Burial provision	Surface Water – small part (Medium Risk)	The flood risk from surface water including run-off from adjoining land should be assessed.	
MIR/PP/HSG129	No	Port Seton Links	Housing - 90	Surface Water / fluvial – large part	The majority of the site is at risk of Fluvial flooding. SEPA recommend, therefore, that this site is not progressed.	-
MIR/PP/HSG130	No	Fishergate Road, Port Seton	Housing	Surface Water – medium risk	Review of the surface water 1 in 200 year flood map indicates that there may be flooding issues at this site. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
MIR/PP/HSG117	No	Land at Redhouse Cottages near Longniddry	Housing - 6		SEPA's flood maps show the site to be at medium risk of river and surface water flooding. Development within this allocation would likely result in floodplain conveyance and storage loss which could result in the increase risk of flooding elsewhere in Redhouse. The flood risk from surface water including run-off from adjoining land should be assessed.	-
PM/PP/HSG030	No	Land adjacent to Bankton Steading	Housing	Surface Water – small part	The flood risk from surface water including run-off from adjoining land should be assessed.	No
PM/PP/BUS005	No	Bankton Business	Employment	Surface Water – small part	There is a small watercourse adjacent to the site. The flood risk from surface water including run-off from adjoining land should be assessed.	No
PM/PP/HSG009	No	Dolphingstone Farm	Housing - 280		N/A	Yes  See Report of Examination Issue 04: Prestonpans Cluster recommended post-examination modification no.3:

						<p><i>In paragraph 2.60, inserting the following sentence at the end:</i></p> <p><i>“A Flood Risk Assessment will be necessary for this site.”</i></p>
PM/PP/HSG097	No	Seton West Mains	Housing	Surface Water – small part	SEPA has raised a number of concerns with regards flood risk. There are potential groundwater issues from nearby mine workings (Blindwells site). There is also a culvert which takes mine water from nearby and discharges into the Seton Burn.	Yes



Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					The site is within Potentially Vulnerable Area 10/23. A small part of the south east of the site is shown to be at risk of river flooding on SEPA's flood map. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	
PM/PP/HSG043	No	Land at Seton Mains	Housing	Surface Water – small part	The site lies within Potentially Vulnerable Area 10/23. The flood risk from surface water including run-off from adjoining land should be assessed.	No
PM/PP/BUS006	No	Prestonrange Museum	Employment		The site is within Potentially Vulnerable Area 10/21. The site is not within an area at risk of river or coastal flooding as identified on SEPA's flood map	No
PM/PP/BUS003	No	Prestonrange	Employment	Surface water	The site is within Potentially Vulnerable Area 10/21. The site is not within an area at risk of river or coastal flooding as identified on SEPA's flood map. The flood risk from surface water including run-off from adjoining land should be assessed.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
<b>TRANENT</b>						
<b>PROP TT1</b> (PREF-T4)	Yes	Windygoul South	Housing - 550	Surface Water – small part	The flood risk from surface water including run-off from adjoining land should be assessed.	No
<b>PROP TT3</b> (PREF-T3)	Yes	Southwest Windygoul	Employment	Surface Water – small part	The flood risk from surface water including run-off from adjoining land should be assessed.	No
<b>PROP TT4</b> (PREF-T2)	Yes	Lammermoor Terrace	Housing - 120	Surface Water / fluvial – small part	Small watercourse could be culverted along the eastern boundary of the site. The location and flood risk should be assessed and no development should develop above the culvert. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
<b>PROP TT5</b> (PREF-T1)	Yes	Bankpark Grove	Housing - 80	Surface Water / fluvial – small part	Small watercourse along the eastern boundary may pose a risk of flooding to the development site and should be assessed, particularly as it is culverted beneath Dovecot Brae/Brickworks Road. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
<b>PROP TT6</b> (ALT-T6)	Alternative	Kingslaw, Tranent	Housing led mixed use - 103	Surface Water – small part	IER has assessed the risk of flooding to a much larger allocation than shown on shapefile ALT-T6 and has identified surface water flood risk. The flood risk from surface water including run-off from adjoining land	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					should be assessed as part of the FRA.	
<b>PROP TT7</b> (PREF-T8)	Yes	Macmerry North	Housing - 150	Surface Water – small part	The IER assess the risk to a larger allocation boundary compared to shapefile PREF-T8 and recommends a FRA due to the small watercourse. The flood risk from surface water including run-off from adjoining land should be assessed.	No
<b>PROP TT8</b> (PREF-T9)	Yes	Macmerry Business Park	Employment	Surface Water – small part Yes	The flood risk from surface water including run-off from adjoining land should be assessed.	No
<b>PROP TT9</b> (PM/TT/HSG045)	Yes	Lamington Road, Gladsmuir	Housing	Surface water – small part	The site is within Potentially Vulnerable Area 10/23. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment. The flood risk from surface water including run-off from adjoining land should be assessed.	No
<b>PROP TT9</b> (PM/TT/HSG089)	Yes	Lamington Road, Gladsmuir	Housing	N/A	The site is not shown to be at risk of river, surface water or coastal flooding on SEPA's flood map. The site is within Potentially Vulnerable Area 10/23. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment.	No
<b>PROP TT10</b> (PREF-T11)	Yes	Tynemount West (Ormiston)	Housing - 140	Surface Water – small part	Surface water shows an extremely small pocket of flood risk. The flood risk from surface water including run-off from	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					adjoining land should be assessed.	
<b>PROP TT11</b> (PREF-T10)	Yes	Elphinstone West	Housing - 80	Surface Water – small part	The flood risk from surface water including run-off from adjoining land should be assessed.	No
<b>PROP TT12</b> (PREF-T13)	Yes	Woodhall Road (Pencaitland)	Housing - 16	Surface Water/Fluvial – small part	Small watercourse is located along eastern boundary and appears to be culverted. FRA required to assess the risk of flooding and route of the culvert. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
<b>PROP TT13</b> (PREF-T14)	Yes	Lempockwells Rd (Pencaitland)	Housing - 120	Fluvial	History of fluvial flooding on Huntlaw Road with runoff from farmer’s field entering the road and threatening properties. A basic FRA was submitted in support of the 2014 application but did not determine the functional floodplain Although no surface water flood risk is shown on the SEPA maps, an FRA should assess this risk in light of the historic information.	Yes
<b>PROP TT14</b> (PM/TT/HSG111)	No	Park View, Pencaitland	Housing - 55		The site is not shown to be at risk of river, coastal or surface water flooding. SEPA has not raised any concerns with regard to flood risk or potential impact on the water environment.	No
PM/TT/HSG095	Yes	Humbie	Housing - 20		The site is not within a Potentially Vulnerable	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
Site removed from LDP at EIP		(Kippithill)			Area. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment.	
PM/TT/HSG012 Site removed from LDP at EIP	Yes	Dryden Field, East Saltoun	Mixed use/housing – 50		The site is not shown to be at risk of river, surface or coastal flooding on SEPA’s flood map. The site is not within a Potentially Vulnerable Area. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment.	No
PREF-T12	Yes	Tynemount East (Ormiston)	Housing - 16	No	N/A	No
ALT-T5	Alternative	Tranent East	Housing - 500-550	Surface Water – small part	Small watercourse flows through the bottom part of the site, enters a culvert beneath Haddington Road before flowing in an easterly direction. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
ALT-T7	Alternative	Tranent Mains	Housing - 300	Surface Water – small part	Small watercourse along the northern boundary. FRA is required. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
SDP/TT/HSG005 – Site B	No	Tranent Mains Site B	Park and Ride/Housing		The site is not shown to be at risk of river or coastal flooding on SEPA’s flood map.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
SDP/TT/HSG005	No	Tranent Mains Site C	budget hotel, nursing home or similar		The site is not shown to be at risk of river or coastal flooding on SEPA's flood map.	No
MIR/TT/OTH028	No	Tranent Burial Provision	Burial Grounds		The site is not known to be at risk of surface or river flooding on SEPA's flood maps.	
MIR/TT/HSG135	No	Land south of Greendykes Farm	Housing	surface water - Medium Risk	SEPA states that a Flood Risk Assessment which assesses the risk from the small watercourse which flows along the western part of the site is required. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
MIR/TT/HSG119	No	Land to south of Westbank Road, Macmerry	Housing	surface water - Medium Risk	The west and north boundaries of the site are shown to be at medium risk of surface water flooding. SEPA states that surface water flooding issues at this site. The flood risk from surface water including run-off from adjoining land should be assessed.	
MIR/TT/OTH026	No	Gladsmuir burial provision	Burial Provision		The site is not shown to be within or adjacent to an area at risk of flooding from any sources on SEPA's flood map.	

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
MIR/TT/HSG132	No	Hillview Road, Ormiston	Housing		SEPA states that various approaches to the village of Ormiston can be quite difficult to navigate due to the River Tyne flooding and local run-off to low-lying parts of the villages. The River Tyne runs along the south side of Ormiston and the low-lying land either side of the river are flood plains that often flood when the water level rises. The site is not shown to be at risk of flooding however to the east and south of the site there are large areas at medium risk of river flooding.	Yes
MIR/TT/HSG134	No	Land North of Limeylands Road, Ormiston	Housing	Fluvial	Flood risk to site likely to be complicated by topography, e.g. the dismantled railway, and the site may be constrained as a result. A Flood Risk Assessment is required which assesses the risk from the Bellyford Burn which flows along the northern boundary of the site.	Yes
MIR/TT/MIN010	No	Land at Wester Pencaitland	Mineral Extraction	Fluvial	The majority of the application site lies within the medium likelihood (0.5% annual probability or 1 in 200 year) flood extent of the SEPA Flood Map, and may therefore be at medium to high risk of flooding.	-
MIR/TT/MIN010	No	Land at Easter Pencaitland	Mineral Extraction	Fluvial	The majority of the application site lies within the medium likelihood (0.5% annual	-

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					probability or 1 in 200 year) flood extent of the SEPA Flood Map, and may therefore be at medium to high risk of flooding.	
MIR/TT/OTH027	No	Pencaitland burial provision	Burial provision		The site is not shown to be at risk of surface or river flooding on SEPA's flood maps.	
MIR/TT/OTH025	No	East Saltoun burial provision	Burial Provision		The site is not shown as being at risk of river or surface flooding. SEPA have not commented on this site.	
PM/TT/HSG080	No	Windygoul South – Strategic Option A (Part of PREF-T4)	Housing – option 110-132 homes plus extension of primary school		The site is not within a Potentially Vulnerable Area.	No
PM/TT/HSG081	No	Windygoul South – Strategic Option B (Part of PREF-T4)	Housing		SEPA has not raised any concerns with regards flood risk.	No
PM/TT/HSG029	No	Kingslaw – Option 3	Mixed use/Housing		The site is within Potentially Vulnerable Area 10/23. SEPA has not raised any concerns with regards flood risk.	No



Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
PM/TT/HSG073	No	Tranent East	Housing (Part of ALT – T5) community facilities	Surface Water – small parts	The site is not shown to be at risk of river or coastal flooding on SEPA’s flood map but there is a small watercourse which runs through the site. SEPA advises that the minor watercourse within the site boundary may require a 6m buffer. The site is partly within Potentially Vulnerable Area 10/23. SEPA has not raised any further concerns with regards flood risk or potential impact on the water environment however an FRA may be required. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
PM/TT/HSG074	No	Tranent East Middle (Part of ALT-5)	Housing -100	Surface Water – small parts	The site is not shown to be at risk of river or coastal flooding on SEPA’s flood map. The site is within Potentially Vulnerable Area 10/23. SEPA has not raised any concerns with regards flood risk. The flood risk from surface water including run-off from adjoining land should be assessed.	No
PM/TT/HSG075	No	Tranent East (North) – Part of ALT-5)	Housing 200-225	N/A	The site is not shown to be at risk of river or coastal flooding on SEPA’s flood map. The site is within Potentially Vulnerable Area 10/23. SEPA has not raised any concerns with regards flood risk	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
PM/TT/HSG059	No	Elphinstone Road	Mixed Use		The site is within Potentially Vulnerable Area 10/23. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment however an FRA may be required.	Yes
PM/TT/HSG014B	No	Elphinstone	Housing	Surface Water – small parts within centre of the site	The site is not shown to be at risk of river or coastal flooding on SEPA’s flood map. The site is not within a Potentially Vulnerable Area. SEPA recommends the site be subject to a flood risk assessment. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
PM/TT/HSG107	No	Elphinstone – land east of bowling green	Housing		The site is not shown to be at risk of river, surface or coastal flooding on SEPA’s flood map. The site is not within a Potentially Vulnerable Area. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment.	No
PM/TT/HSG099	No	Elphinstone – south of Buxley Road	-	Surface Water – small part	The site is not within a Potentially Vulnerable Area. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment. The flood risk from surface water including run-off from adjoining land should be assessed.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
PM/TT/HSG057 (PM/TT/HSG051 and PM/TT/HSG052 are within part of this site)	No	Ormiston	Housing	Fluvial	The Bellyford Burn flows along the northern boundary of the site. This presents flood risk to the northern site boundary, which could be avoided through appropriate design. The site will potentially require a flood risk assessment. A 6-12m buffer would be required.	Yes
PM/TT/HSG051 (PM/TT/HSG057 includes this site also)	No	Marketgate East, Ormiston	Housing	Fluvial	The Bellyford Burn flows along the northern boundary of the site, and the site is partially within a functioning floodplain. This presents flood risk to the northern site boundary, which could be avoided through appropriate design. The site will potentially require a flood risk assessment. A 6m buffer would be required.	Yes
PM/TT/HSG052	No	Marketgate West Ormiston	Housing	Fluvial	The Bellyford Burn flows along the northern boundary of the site. This presents flood risk to the northern site boundary, which could be avoided through appropriate design. The site will potentially require a flood risk assessment.	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
PM/TT/HSG019	No	Ormiston Bowling Club, Limeylands Road	Housing	Surface Water – small part	The site is not shown to be at risk of river or coastal flooding on SEPA's flood map. There is a small pocket of surface water flooding at the southern site boundary. The site will potentially require a drainage impact assessment. The site is not within a Potentially Vulnerable Area. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment. The flood risk from surface water including run-off from adjoining land should be assessed.	No
PM/TT/HSG023	No	Puddle Wood	Housing		The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. The site will potentially require a flood risk assessment due to a small adjacent watercourse.	Yes
(PM/TT/HSG093)	No	East Saltoun – West Crescent	Housing		The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. The site is not within a Potentially Vulnerable Area.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
PM/TT/HSG092	No	New Winton	Housing	N/A	The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. The site is not within a Potentially Vulnerable Area.	No
PM/TT/HSG025	No	Greenhead Farm, West Saltoun	Housing - 20-25		The site is not shown to be at risk of river, surface water or coastal flooding on SEPA's flood map. The site is not within a Potentially Vulnerable Area. Due to a watercourse flowing through the site, a flood risk assessment may potentially be required. SEPA advises that the site is likely to be constrained due to flood risk.	Yes
PM/TT/HSG036	No	Glenkinchie	Housing		The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. The site is not within a Potentially Vulnerable Area.	No
PM/TT/HSG061	No	Humbie 1	Housing	Surface Water - small	SEPA noted that if a significant scale of development took place there may be issues with waste water treatment capacity; a private treatment option would not be supported.  The site is not within a Potentially Vulnerable	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					Area. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment. The flood risk from surface water including run-off from adjoining land should be assessed.	
PM/TT/HSG062	No	Humbie 2	Housing		SEPA has pointed out that existing farm buildings are served by septic tanks but new development should connect to the public sewer. Existing buildings should ideally also be served by any new sewer connection. The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map and the site is not within a Potentially Vulnerable Area. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment	No
PM/TT/HSG063	No	Humbie 3	Housing	Surface Water – small part	SEPA has pointed out that if a significant scale of development took place there may be issues with waste water treatment capacity; a private treatment option would not be supported. The site is not within a Potentially Vulnerable Area. SEPA has not raised any concerns with regards flood risk or potential impact on the water environment.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					The flood risk from surface water including run-off from adjoining land should be assessed.	
PM/TT/MIN001	No	Windy Mains near Humbie	Mineral extraction	Surface Water – small part	More information on the type of extraction would be needed. SEPA advises that there are no water features within the site or on its boundaries but there is potential for dewatering or long-term pumping into a watercourse that may increase risks downstream without mitigation. It is therefore recommended the site be subject to a flood risk assessment. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
PM/TT/HSG017	No	Field next to Polson Park Western Boundary	Housing - 6		The site is within Potentially Vulnerable Area 10/23. SEPA has not raised any concerns with regards flood risk.	No
PM/TT/HSG003	No	Birsley Brae, Tranent	Housing		The site is not shown to be at risk of river or coastal flooding on SEPA's flood map. The site is within Potentially Vulnerable Area 10/23. SEPA has not raised any concerns with regards flood risk or potential impact on the	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med- high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					water environment.	
PM/TT/HSG054	No	Meadowmill, Prestonpans	Housing	Surface Water / fluvial – small part	<p>Land immediately to the south is at risk of flooding from a water course, with surface water flooding adjacent to this and just within the site boundary. This area could easily be avoided through appropriate design.</p> <p>The site itself is not shown to be at risk of river or coastal flooding on SEPA’s flood map. The site is within Potentially Vulnerable Area 10/23. SEPA recommends the site be subject to a Flood risk assessment. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.</p>	Yes
PM/TT/HSG069	No	St Josephs School	Mixed Use	Surface Water	The northern (currently undeveloped) part of the site is at risk of flooding from the adjacent watercourse. The site will potentially require a flood risk assessment. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes



Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
PM/TT/HSG082	No	Meadowmill	Mixed	Surface water	SEPA's flood map indicates that the north-western part of the site is at risk of flooding from a watercourse, and from surface water. The site will potentially require a flood risk assessment. The site is within Potentially Vulnerable Area 10/23. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
<b>BLINDWELLS</b>						
<b>PROP BW1</b> (PM/TT/HSG013)	Yes	Eastern Extension of Allocated Blindwells Site (see also HSG004)	Mixed Use/housing - potential for up to 1600 dwellings	Surface water/ fluvial	SEPA advises that there are reports of flooding on the downstream Seton Burn from additional flows from the mine water pumping at Blindwells.  Watercourses run through the site, and there are areas shown on SEPA's flood maps to be at risk of flooding. There are also issues on the Seton Dean Burn from poorly designed culverts. SEPA considers there may be serious downstream implications should there be any increase in flows. Therefore, a FRA is required which assesses the flood risk from the watercourses located within the site.	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	
<b>PROP BW2</b> (PM/TT/OTH103)	Yes	PM/TT/OTH103 (whole area), includes PM/TT/HSG013, PM/TT/OTH003 and PM/TT/HSG004	Mixed use 6000	Surface Water/ fluvial - small part	<p>Flooding issues in Seton and it is imperative that this development does not increase the risk of flooding downstream. Groundwater flood risk could be an issue, but currently controlled by pumping by coal authority.</p> <p>FRA has to take account the hydrological changes brought about by the mining activity which includes runoff rates and groundwater. There should be no increase in runoff rates downstream. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.</p>	Yes
PM/TT/HSG004	No	Blindwells New Settlement, Eastern expansion of allocated Blindwells	Housing	Surface Water/ fluvial	Watercourses run through the site, and there are areas shown on SEPA's flood maps to be at risk of flooding. SEPA also advises that there are reports of river flooding on the downstream Seton Burn. There are also issues on the Seton Dean Burn from poorly designed culverts. SEPA	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					considers there may be serious downstream implications should there be any increase in flows. Therefore, a FRA is required which assesses the flood risk from the watercourses located within the site. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	
PM/PP/OTH003	No	Blindwells East	Mixed use	Surface Water	<p>There are reports of flooding on the downstream Seton Burn from additional flows from the mine water pumping at Blindwells.</p> <p>Watercourses run through the site, and there are areas shown on SEPA's flood maps to be at risk of flooding. There are also issues on the Seton Dean Burn from poorly designed culverts. SEPA considers there may be serious downstream implications should there be any increase in flows.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.</p>	Yes
MIR/TT/128, MIR/TT/OTH016	No	Blindwells Expansion	Housing (northwest	Surface Water	SEPA comment that there is surface water flood risk on part of the site, and multiple	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
and MIR/TT/OTH017		South of A1	section), Other (southeast section), Woodland planting (south of A199)		watercourses through the site. There are reports of flooding on the nearby Seton Burn from additional flows from the mine water pumping at Blindwells.  SEPA will require a FRA to look at the risk from the small watercourses. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	
<b>HADDINGTON</b>						
<b>PROP HN1</b>  (SDP/HN/HSG001)	Committed	Letham Mains	Housing - 800	Fluvial	The site is at risk of flooding from the two burns that flow through the centre and along its eastern boundary. The site is not within a Potentially Vulnerable Area as identified by SEPA. A flood risk assessment has already been prepared for the site to assess the flood risk from the burns and the masterplan safeguards areas from vulnerable development as appropriate.	Yes
<b>PROP HN2</b>  (PREF-H2)	Yes	Letham Mains (expansion)	Housing - 275	Fluvial - small part	Letham burn flows along the northern boundary of allocation PREF-H2 and a FRA will be required. IER has identified this	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med- high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					source of flooding.	<p>See Report of Examination Issue 07: Haddington Cluster recommended post-examination modification no.2:</p> <p><i>In paragraph 2.119 adding the following as a new sentence immediately prior to the final sentence: "A Flood Risk Assessment will be necessary at this site."</i></p>

<p><b>PROP HN3</b> (PREF-H1)</p>	<p>Yes</p>	<p>Dovecot</p>	<p>Housing – 193</p>	<p>Fluvial - small part</p>	<p>FRA was carried out as part of the 13/00071/PPM application which was reviewed with no objection. All development was positioned out-with the functional floodplain</p> <p>Any new development layout will have to take account the findings of the FRA. Have highlighted that a FRA is required to ensure that any development takes account flood risk.</p>	<p>Yes</p>
<p><b>PROP HN4</b> (PREF-H3)</p>	<p>Yes</p>	<p>Gateside East</p>	<p>Housing led mixed use - 80</p>	<p>Surface Water – small part</p>	<p>Topographic information was submitted in support of the planning application which showed that there was a 4m height difference between the development and the small watercourse and therefore not at flood risk</p> <p>Surface water flood map extent picks up the low lying drainage ditch and as a result there is no surface water flood risk to the site. No</p>	<p>No</p>

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					FRA has been requested as there is a significant height difference.	
<b>PROP HN6</b> (PREF-H4)	No	Alderston	Housing - 89	No	Small watercourse flows along the western boundary and has to be assessed. IER has identified this source of flooding.	No
<b>PROP HN8</b> (PREF-H5)	Yes	Peppercraig Quarry	Employment	No	N/A	No
OTH-H7	Other	Dovecot		Fluvial - small part	FRA required to assess the risk from the small watercourse. There is also a small drain located at the southern boundary which may also pose a flood risk. IER has identified the risk of flooding	No
OTH-H6	Other	Amisfield	Housing - 500	Fluvial - small part	Significant history of flooding in Haddington in 1775, 1948, 1956 however we hold no information to determine whether site was flooded. ELC have detailed FRA for Haddington and only shows a small risk of flooding to site. SEPA also carried out some modelling, again showing a small risk of flooding	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					FRA required to assess flood risk from Tyne (which could be based on existing studies) but also there is a small watercourse travelling in a north to south direction towards the site which enters a culvert as it reaches the A1. This watercourse is likely to be culverted within the site and has to be addressed. IER has identified the Tyne as a source of flood risk, but no mention of this small watercourse.	
OTH-H8	Other	West Letham	Housing - 600	Fluvial - small part	Letham Burn flows along the southern boundary of the site and poses a small flood risk which will have to be identified within a FRA. IER has identified this source of flooding	No
MIR/HN/HSG125	No	Letham Mains Holdings	Housing	Surface Water	Consideration also will need to be given to bridge and culvert structures near to the site.  The site is not shown to be at risk of river flooding on SEPA's flood map. SEPA will require a Flood Risk Assessment to consider the risk from the Letham Burn which flows along the northern boundary. The flood risk from surface water including run-off from adjoining land should be assessed.	Yes



Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
MIR/HN/OTHO21	No	Haddington Burial provision	Burial provision		The site is not shown to be within or adjacent to an area at risk of flooding from any sources on SEPA's flood map.	No
PM/HN/HSG065	No	Site at Monkrigg Road	Housing	Surface Water – small part	The site is not shown to be at risk of flooding on SEPA's flood map, with the exception of a very small area in the north eastern corner which is shown to be at risk of surface water flooding. The site does lie within Potentially Vulnerable Area 10/24. A small watercourse runs through the site and SEPA has advised that a Flood Risk Assessment would be required to assess the flood risk from this. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
PM/HN/HSG103	No	Gifford	Affordable Housing - 40	N/A	The site is not shown to be within or adjacent to an area at risk of flooding from any sources on SEPA's flood map. SEPA has not raised any concerns with regards flood risk or impact on the local water environment.	No
PM/HN/HSG020	No	Garvald Glebe	Housing – 10-12	Surface Water	There is historic evidence of flooding in Garvald (Great Borders Flood of 1948).  The site is adjacent to an area shown as being	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					at risk of flooding on SEPA's flood map. SEPA has advised that the height difference between the site and flood risk area should mitigate the risk to the site.	
PM/HN/HSG001	No	Vacant land at Liberty Hall	Housing - 1		The site is not shown as being at risk of flooding on SEPA's flood map. There is a small watercourse running through the site and another along the SE boundary and the development of the site could have the potential to affect flood risk on site and elsewhere – SEPA would require a Flood Risk Assessment to assess the small watercourses.	Yes
PM/HN/HSG040	No	Land at Liberty Hall	Smallholding with associated housing.	Surface water – very small part	The site is not shown to be at risk of river flooding on SEPA's flood map. It is not within a Potentially Vulnerable Area. A small watercourse runs along part of the site's boundary.	Yes
<b>DUNBAR</b>						
<b>PROP DR2</b> (PREF-D3)	Yes	Halhill North	Housing - 250	Surface Water / fluvial – small part	Report that in 2002 Belhaven Hospital was flooded and patients had to be evacuated with the generator room shut down. Unsure whether any measures have since been put in	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					<p>place to mitigate this risk of flooding</p> <p>Fluvial flood risk identified however watercourse appears to be culverted within the vicinity of the site. There is also a number of drains flowing within the forestry area adjacent to Lochend Kennels. These appear to be culverted and may flow through the site and have to be investigated. IER has identified that the site is at risk of fluvial and surface water flood risk.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.</p>	
<p><b>PROP DR4</b> (PREF-D4)</p>	<p>Yes</p>	<p>Brodie Road</p>	<p>Housing- 50</p>	<p>Fluvial - part</p>	<p>IER has identified the risk of surface water flooding. This poses a reasonably significant risk to the site.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed.</p>	<p>No</p>

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
<b>PROP DR5</b> (PREF-D5)	Yes	Newtonlees North	Housing -250	Surface Water – small part	IER has identified the risk of surface water flooding.  The flood risk from surface water including run-off from adjoining land should be assessed.	No
<b>PROP DR6</b> (PREF-D2)	Yes	Beveridge Row	Housing - 90	Surface Water / coastal – part	The predicted 200 year still water level is 3.84mAOD. A FRA was undertaken for the development site and survey information shows that the site is above the risk of coastal flooding. We have received photographs (when commenting upon the planning application) showing ponding water on the site which has to be taken into account as part of the drainage design.  IER has identified both sources of flooding. Have requested FRA to ensure that the development takes account findings of the FRA.  The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
<b>PROP DR7</b> (SDP/DR/BUS0004)	Yes	Spott Road	Employment	Surface Water – small part (medium risk).	The site is within Potentially Vulnerable Area 10/25. It is not within an area at risk of river or coastal flooding based on SEPA’s flood map. The flood risk from surface water including run-off from adjoining land should be assessed.	
<b>PROP DR9</b> (PREF-D7)	Yes	East Linton Auction Mart	Housing	No	N/A	No
<b>PROP DR10</b> (PREF-D12)	Yes	Innerwick East	Housing - 18	No	N/A	No
<b>PROP DR11</b> (PREF-D10)	Yes	St John Street (Spott)	Housing - 6	No	Site lies approximately 15m above the watercourse and therefore not at risk of flooding	No
<b>PROP DR12</b> Site added to LDP though EIP	Committed	Newtonlees Farm Dunbar	Housing - 115	Surface Water – small part	17/00020/PPM – planning permission in principle approved. Flood risk assessment provided with application.  There is a need for further assessment at the detailed application state, which should include an assessment of the potential for groundwater flooding. A detailed SUDS scheme to the satisfaction of the flood authority will be required.	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
PREF-D12	Yes	Innerwick East	Housing - 18	No	N/A	No
PREF-D9	Yes	The Crofts (Stenton)	Housing - 16	No	N/A	No
ALT-D1	Alternative	Eweford	Housing - 1000	Surface Water / fluvial – small part	<p>History of flooding at West Barns with the culvert surcharging the railway line underneath the railway line. We hold no additional information regarding the history of flooding and recommend contact is made with flood prevention officer</p> <p>There is a small watercourse which is culverted through the site at Eweford and flows underneath the railway line. IER has identified the risk of surface water flooding.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed.</p>	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
ALT-D11	Alternative	Innerwick West	Housing - 18	No	N/A	
OTH-D8	Other	East Linton Expansion Area of Search		Surface Water / fluvial – small part	<p>Recorded flood level of 20.26mAOD within the centre of East Linton as shown by a plaque on wall. Approximately the 1 in 200 year flood level. 1948 event affected a significant area of Phantassie Farm as well some properties within the centre of East Linton</p> <p>Vast majority of the site is developable. Any new development should be located out-with the 1 in 200 year functional floodplain. IER has identified the risk of flooding to the site which includes surface water.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed.</p>	
MIR/DR/HSG118	No	Brands Mill, Broxburn	Housing	No	There appears to be sufficient height difference between the site and the channel. Runoff to the Brox Burn will need to be	

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					<p>carefully managed to ensure there is no increase in risk to the immediate downstream properties.</p> <p>The site is shown to not be at risk of surface water flooding or river flooding on SEPA's flood map.</p>	
MIR/DR/HSG126	No	Land at Sheriff Fields, West Barns	Agriculture	Surface water - to the North	<p>The site is shown to be at medium risk of river flooding due to proximity to the Biel Water on SEPA's flood map. SEPA note flooding was experienced in West Barns in 2002, 2007, and 2009. A FRA assessing the risk from the Biel Water and mill lade which flows through the site, as well as surface water issues, will also be required. The site is likely to be constrained due to flood risk. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.</p>	Yes
MIR/DR/OTHO19a	No	Dunbar Burial Provision	Burial provision		<p>The site is not shown to be within or adjacent to an area at risk of flooding from any sources on SEPA's flood map.</p>	No



Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
MIR/DR/HSG124	No	Drylaw, East Linton	Housing - 215	Surface water	<p>The contours suggest a sufficient height difference between the site and the Tyne to avoid flooding from this source.</p> <p>The site is not shown to be at risk of river flooding on SEPA's flood map.</p> <p>The site is not within a Potentially Vulnerable Area.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed.</p>	No
MIR/DR/HSG123	No	Phantassie Farm, East Linton	Housing	Surface water – north west(High Risk)	<p>SEPA state that they would require an FRA which assesses the risk from the River Tyne which flows along the west and north perimeter of the site.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.</p>	Yes
MIR/DR/HSG132	No	Preston Mains, East Linton	Housing - 250	Surface water	<p>SEPA state that OS Map contours suggest a sufficient height difference between the site and the River Tyne to avoid flooding of the site from the Tyne.</p> <p>The site is shown to not be at risk of river flooding on SEPA's flood map.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.</p>	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
MIR/DR/OTHO20	No	East Linton Burial Provision	Burial provision		The site is not shown to be within or adjacent to an area at risk of flooding from any sources on SEPA's flood map.	No
PM/DR/HSG109	No	Station Road Field	Housing	No	The site is within Potentially Vulnerable area 10/25. It is not within an area at risk of river, coastal or surface water flooding based on SEPA's flood map.	No
PM/DR/HSG090	No	East Linton West Expansion	Housing	No	The site is not within a Potentially Vulnerable Area. SEPA's flood map does not identify the site as being at risk of river, coastal or surface water flooding.	No
PM/DR/HSG038	No	Land at Kennel Brae	Housing -3	Fluvial - adjacent	<p>Due to historic flooding downstream and near the site careful consideration must be given to development on site to ensure there is no increase of runoff downstream which could affect vulnerable receptors including Belhaven hospital and the railway line.</p> <p>The site is within Potentially Vulnerable Area 10/25. A very small part of the northern tip of the site is within an area at risk of flooding from a watercourse. SEPA has commented that an FRA would be required to assess the flood risk from the small watercourse which flows through the site.</p>	Yes

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
PM/DR/HSG035	No	Land at Broxburn Cottages	Housing	No	The site is not within a Potentially Vulnerable Area or identified as being within an area at risk of coastal, river or surface water flooding on SEPA's flood map.	No
PM/DR/OTH004	No	Land to East of A1 Little Pinkerton	Road side uses	No	The site is not within a Potentially Vulnerable Area. SEPA's flood map does not show that the site is at risk from river, coastal or surface water flooding.	No
PM/DR/OTH008	No	North West Quarry	Biodiversity enhancements and conservation,	Surface water – small part	There is an existing water body, however it is intended that the presence of water would be used to create and enhance nature habitats. SEPA has advised that an FRA to assess coastal flood risk would be needed should any other uses be proposed.	No
PM/DR/HSG005	No	Blue Row Cottages	Housing	No	SEPA has stated that a Flood Risk Assessment would be required to assess flood risk from the small watercourse which flows along the eastern site boundary.	Yes
<b>NORTH BERWICK</b>						
<b>PROP NK4</b> (PM/NK/HSG070)	Yes	Tantallon Road, North Berwick	Mixed use	No	The site is not shown to be at risk of river or coastal flooding on SEPA's flood map. It is not within a Potentially Vulnerable Area.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
<b>PROP NK5</b> (ALT-N1)	Alternative	Ferrygate	Housing - 200	No	N/A	No
<b>PROP NK6</b> (PREF-N5)	Yes	Fire Service College (Gullane)	Housing led mixed use - 100	Surface Water – small part	IER has identified surface water flooding issue. Only a very small part of the site is shown to be at risk.  The flood risk from surface water including run-off from adjoining land should be assessed.	No
<b>PROP NK7</b> (PREF-N8)	Yes	Saltcoats (Gullane)	Housing - 150	No	N/A	No
<b>PROP NK8</b> (ALT-N6)	Alternative	Fentoun Gait East (Gullane)	Housing - 70	No	N/A	No
<b>PROP NK9</b> (ALT-N7)	Alternative	Fentoun Gait South (Gullane)	Housing - 15	No	N/A	No
<b>PROP NK10</b> (PREF-N9)	Yes	Aberlady West	Housing - 100	No	N/A	No
<b>PROP NK11</b> PREF-N4	Yes	Castlemains (Dirleton)	Housing - 30	No	N/A	No
PREF-N2	Yes	Tantallon Road	Employment	No	N/A	No
ALT-N3	Alternative	Foreshot Terrace	Housing - 30	No	N/A	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
		(Dirleton)				
ALT-N10	Alternative	Aberlady East	Housing - 100	No	N/A	No
OTH-N11	Other	Potential Drem Expansion Area of Search	Housing led mixed use	Surface Water / fluvial – small part	<p>Vast majority of the site is developable and the detail of the FRA will be determined by the location of the new development. All culverts should be taken into consideration. There appears to be informal embankments along the Peffer Burn which should not be taken into consideration as offering protection to the development site.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed.</p>	No
MIR/NK/HSG138	No	Mains Farm South	Housing	Surface water - medium	<p>The site is not shown to be at risk of river flooding on SEPA's flood map.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed.</p>	No
MIR/NK/HSG131	No	Land to the south of Bunkershill	Housing	No	The site is not shown to be within or adjacent to an area at risk of flooding from any sources on SEPA's flood map.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
MIR/NK/OTHO22	No	Aberlady Burial Provision			The site is not shown to be within or adjacent to an area at risk of flooding from any sources on SEPA's flood map.	No
MIR/NK/HSG006b	No	Bickerton Fields AKA Aberlady East (Northern Field)	Housing and Orchard		The northern half of the site is shown to be at medium risk of coastal flooding. The site is not shown to be at risk of river or surface flooding on SEPA's flood map. It is in a Potentially Vulnerable Area.	Yes
MIR/NK/OTHO23	No	Dirleton Burial Provision	Burial		The site is not shown to be within or adjacent to an area at risk of flooding from identified sources on SEPA's flood map however it is in a Potentially Vulnerable Area.	No
MIR/NK/HSG122	No	Land at Drem	Housing	Surface water – High Risk	SEPA would require an FRA which assesses the risk from the Peffer Burn and tributaries. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
MIR/NK/HSG136	No	Land south and west of Drem	Housing	Surface water – small pockets (High Risk)	The site is not shown to be at risk of river flooding on SEPA's flood map. The flood risk from surface water including run-off from adjoining land should be assessed.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
MIR/NK/HSG137	No	Land at Fenton Barns	Housing - 1000	Surface water – small pockets	The site is not shown to be at risk of river flooding on SEPA’s flood map. The flood risk from surface water including run-off from adjoining land should be assessed.	No
MIR/NK/HSG121a	No	Land at Fenton Barns	Housing	Surface water – small pockets (medium risk)	The site is not shown to be at risk of river flooding on SEPA’s flood map. SEPA would require a Flood Risk Assessment to assess the risk from flooding of the Peffer Burn. The flood risk from surface water including run-off from adjoining land should be assessed as part of the FRA.	Yes
MIR/ NK/OTH024	No	Whitekirk Burial Provision	Burial provision		The site is not shown to be within or adjacent to an area at risk of flooding from any sources on SEPA’s flood map.	No
PM/NK/HSG071	No	Tantallon Road	Housing - 15	No	The site is not shown to be at risk of river or coastal flooding on SEPA’s flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG022	No	Glebe House	Housing	No	The site is not shown to be at risk of river, surface or coastal flooding on SEPA’s flood map. It is not within a Potentially Vulnerable Area.	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
PM/NK/HSG084	No	Gilsland Housing Group within Former Hospital Compound at Newhouse Road	Housing - 6		The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG026a	No	Muirfield, Gullane	Housing	No	The site is not shown to be at risk of river or coastal flooding on SEPA's flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/OTH006	No	Land at Morin Builders yard,		No	The site is not shown to be at risk of river or coastal flooding on SEPA's flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG098	Yes	Aberlady – Elcho Terrace	Affordable housing –24		The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. Aberlady is however within Potentially Vulnerable Area 10/23.	No
PM/NK/HSG039	No	Land at Kirk Road, Aberlady	Affordable housing –20	No	The rivers in the vicinity of Aberlady have been classified as 'bad' ecological status by SEPA. The site is not shown to be at risk of river,	



Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					surface or coastal flooding on SEPA's flood map. Aberlady is however within Potentially Vulnerable Area 10/23.	
PM/NK/HSG046	No	Land off Castle Park, Dirleton	Housing – 4-5	No	The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG047	No	Land to the East of Ware Road, Dirleton.	Housing – 15-20	No	The site is not shown to be at risk of river or coastal flooding on SEPA's flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG049	No	Land to the south of Gylers Road, Dirleton.	Housing – 45-50	No	The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG068	No	Speedwell Gardens, Dirleton	Housing – 2	No	The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/OTH009	No	Rathowan, Main Road, Dirleton	Garden ground for existing dwelling (inclusion within settlement)		N/A	

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
			boundary)			
PM/NK/HSG085	No	Dirleton Glebe	Housing – 10-12		The site is not shown to be at risk of river, surface or coastal flooding on SEPA’s flood map. It is not within a Potentially Vulnerable Area. A small watercourse runs along the western and northern boundaries and SEPA has advised that a Flood Risk Assessment would be required to assess the impact on the Eel Burn and its tributary.	Yes
PM/NK/HSG033	Yes	Land at Athelstaneford	Housing	No	The site is not shown to be at risk of river, surface or coastal flooding on SEPA’s flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG045	No	Athelstaneford Glebe	Housing		The site is not shown to be at risk of river, surface or coastal flooding on SEPA’s flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG083	No	East Fortune Hospital	Housing – approximately 300		The site is not shown to be at risk of river, surface or coastal flooding on SEPA’s flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG100	No	Whitekirk Rural	Affordable		The East Peffer Burn in the vicinity of	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
		Affordable Housing Option	Housing		Whitekirk is classed as ‘bad’ ecological status by SEPA and is also identified as sensitive area under the Urban Waste Water Treatment Directive The site is not shown to be at risk of river or coastal flooding on SEPA’s flood map. It is not within a Potentially Vulnerable Area.	
PM/NK/HSG094	No	Potential Drem Expansion	Small scale village expansion – housing		Rivers in the vicinity of Drem were classified as ‘bad’ ecological status in 2008 by SEPA including Gosford Burn And West Peffer Burn. West Peffer Burn is also designated as a sensitive area under the Urban Waste Water Treatment Directive. The site is not shown to be at risk of river or coastal flooding on SEPA’s flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG108	No	Drem – The Chesters	Affordable housing		The site is not shown to be at risk of river or coastal flooding on SEPA’s flood map. It is not within a Potentially Vulnerable Area.	No
PM/NK/HSG016	No	Fenton Barns	Mixed use		West Peffer/ Mill Burn is classified as being of bad ecological status and is designated as a sensitive area under the Urban Waste Water Treatment Directive. The site is not shown to be at risk of river or	No

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and indicative housing numbers	SEPA-allocation potentially at med- high risk of flooding	Flood Risk Comments	SEPA – FRA Recommended
					<p>coastal flooding, but small areas are susceptible to surface flooding, as shown on SEPA's flood map.</p> <p>The flood risk from surface water including run-off from adjoining land should be assessed.</p>	
PM/NK/HSG064	No	Site at Camptoun, near Haddington	Housing – 3-4	No	<p>The site is not shown to be at risk of river, surface or coastal flooding on SEPA's flood map. The site is within Potentially Vulnerable Area 10/23.</p>	

Site Reference (MIR Site Reference)	Preferred Site?	Site Name	Proposed Use and Indicative housing numbers	SEPA-allocation potentially at med-high risk of flooding	Flood risk comments	SEPA - FRA Recommended	Post-examination modification to LDP
<b>MUSSELBURGH</b>							
MH10	Yes	Land at Dolphinstone	Housing - 600		Known flooding issues downstream of site. Flood Risk Assessment required to assess risk from small watercourse on eastern boundary adjacent to A1 and Ravenshaugh Burn which appears to be culverted along western boundary of site. SEPA provided significant input as part of Masterplan application and did not object on grounds of flood risk. ELC requested a Surface Water Drainage Assessment to ensure there was no increased flood risk downstream. ELC will therefore also require an appropriate Surface Water Drainage Assessment prior to commencement of works on site	Yes - and a surface water drainage assessment required	N/A

MH11	Yes	New Secondary School Provision	Education - 6.2 ha		Known flooding issues downstream of site. Flood Risk Assessment required to assess risk from small watercourse on eastern boundary adjacent to A1 and Ravenshaugh Burn which appears to be culverted along western boundary of site. SEPA provided significant input as part of Masterplan application and did not object on grounds of flood risk. ELC requested a Surface Water Drainage Assessment to ensure there was no increased flood risk downstream. ELC will therefore also require an appropriate Surface Water Drainage Assessment prior to commencement of works on site	Yes - and a surface water drainage assessment required	See Report of Examination Issue 03: Musselburgh Cluster recommended post-examination modification no.3:  <i>In paragraph 2.36, adding the following sentence at the end: "A Flood Risk Assessment will be required for this site."</i>
Table MH1	Committed	Brunton Wireworks	Housing - 140		There are a number of records of flooding along the River Esk in Musselburgh. ELC have a flood study for this area. Flood Risk Assessment required to assess flood risk from the River Esk. Topographical information on existing and proposed site levels and finished floor levels may be sufficient to address concerns. The site is not known to be at risk of flooding - Appl. 16/01029/AMM granted	Yes	See Report of Examination Issue 03: Musselburgh Cluster recommended post-examination modification no.5:  <i>In paragraph 2.45, inserting third and fourth sentences as follows:  "Since they were previously allocated, these sites may be affected by legislative and regulatory changes, as well as</i>

					29.09.17 with a SuDS condition		<i>identified changes to the physical environment including updated flood risk mapping. Up to date information, including flood risk assessment where necessary, will require to be submitted to ensure compliance with current legislation and the policy provisions of the plan."</i>
Table MH1	Committed	Drummohr House	Housing - 10		Known flooding issues nearby at Goshen and land to the south although no details of flooding at this site. The site is not known to be at risk of flooding - Appl. 16/00530/P granted 06.09.17	No	See Report of Examination Issue 03: Musselburgh Cluster recommended post-examination modification no.5 (as above)
Table MH1	Committed	Chalkieside Steading	Housing - 9		The site is not known to be at risk of flooding - Appl. 15/00696/P granted 07.11.16	No	See Report of Examination Issue 03: Musselburgh Cluster recommended post-examination modification no.5 (as above)

**PRESTONPANS**

Table PS1	Not in MIR (lapsed)	West Seaside	Housing - 9		<p>The site lies a short distance from the coastal flood envelope. For information, an approximate 1 in 200-year water level for this area is 3.96m AOD (+/- 0.3m) based on extreme still water level calculations using the Coastal Flood Boundary Method. This does not take account the potential effects of wave action, funnelling or local bathymetry. Prestonpans Flood Prevention Scheme 1972 runs to the north. At location of the site this consists of masonry wall for coastal protection. There is currently a masonry wall that is not a formal flood defence, but offers some protection to the site. Information on existing and proposed site levels and finished floor levels should be provided to demonstrate site is free from coastal flood risk. No flood risk shown on SEPA Flood Hazard Maps but site may be liable to wave overtopping in extreme conditions. A Flood</p>	Yes	<p>See Report of Examination Issue 04: Prestonpans Cluster recommended post-examination modification no.3:</p> <p><i>In paragraph 2.62, inserting third and fourth sentences as follows:</i></p> <p><i>“Since they were previously allocated, these sites may be affected by legislative and regulatory changes, as well as identified changes to the physical environment including updated flood risk mapping. Up to date information, including flood risk assessment where necessary, will require to be submitted to ensure compliance with current legislation and the policy provisions of the plan.”</i></p>
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					Risk Assessment will be required.		
Table PS1	Committed	Cockenzie House (housing proposal not nursing home)	Housing - 20		The site lies a short distance from the coastal flood envelope. For information, an approximate 1 in 200-year water level for this area is 3.96mAOD (+/- 0.3m) based on extreme still water level calculations using the Coastal Flood Boundary Method. This does not take account the potential effects of wave action, funnelling or local bathymetry. The site has potential Surface Water flood	No	See Report of Examination Issue 04: Prestonpans Cluster recommended post-examination modification no.3 (as above)

					<p>risk shown therefore a Surface Water Drainage Assessment may be required prior to commencement of works on site - Appl. 11/00692/P - granted 25.08.14</p>		
Table PS1	Committed	Seton East Steading	Housing - 9		<p>Multiple reports of flooding in surrounding area. Primarily source of flooding attributed to Blindwells mine workings and flooding from groundwater. There appears to be a watercourse culverted through the southern part of the site (access road) and under Fishergate Road. Further information on this watercourse culvert should be provided to demonstrate it does not pose a flood risk to the site. We would also recommend further investigation of groundwater levels. East Lothian Council may have further information on the mine workings and associated flooding. It is likely</p>	Yes	<p>See Report of Examination Issue 04: Prestonpans Cluster recommended post-examination modification no.3 (as above)</p>

					the site is largely developable. The Council notes that only a small part of the site to the south east where there is no existing built development is at flood risk, as shown on SEPA flood map. In relation to proposal 15/00213/P it would see the access road does cross an area of land at flood risk, however SEPA raise no objection on flood risk grounds. SEPA did acknowledge that there is recognised groundwater and associated flood risk from watercourse/culvert on adjoining land, therefore an assessment of this risk will be required. Appl 15/00213/P - pending		
<b>TRANENT</b>							
TT2	Yes	Windygoul Primary School Expansion Land	Education		The flood risk from surface water including run-off from adjoining land should be assessed as part of a Surface Water Drainage Assessment which may be required prior to commencement of works on site	No	N/A
Table TT1	Committed	Westbank Steading	Housing - 6		The site is not known to be at risk of flooding - Appl. 16/00531/P - pending	No	See Report of Examination Issue 06: Tranent Cluster recommended post-

							<p>examination modification no.12:</p> <p><i>In paragraph 2.108, inserting third and fourth sentences as follows:</i></p> <p><i>“Since they were previously allocated, these sites may be affected by legislative and regulatory changes, as well as identified changes to the physical environment including updated flood risk mapping. Up to date information, including flood risk assessment where necessary, will require to be submitted to ensure compliance with current legislation and the policy provisions of the plan.”</i></p>
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Table TT1	Draft LDP stage (lapsed)	Highlea Steading, Humbie	Housing - 5		<p>Flood Risk Assessment required to assess the risk to the site from the tributary of the Humbie Water which runs to the south of the site. Should there be significant elevation difference between the watercourse and the site then topographical information may be sufficient. The site is shown to have a flood risk on SEPA flood map. ELC is unsure why this should be the case. It seems to be potential fluvial/surface water flood risk. Therefore a flood risk assessment/Surface Water Drainage Assessment will be required - App. 17/00674/P - pending</p>	Yes	See Report of Examination Issue 06: Tranent Cluster recommended post-examination modification no.12 (as above)
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Table TT1	Not in MIR	Highlea Farm, Humbie	Housing - 6		<p>Flood Risk Assessment required to assess the risk to the site from the tributary of the Humbie Water which runs to the south of the site. Should there be significant elevation difference between the watercourse and the site then topographical information may be sufficient. The site is not shown to have a flood risk on SEPA flood map (although an area to the south is shown to be i.e. TT1). Application 16/00782/P granted 25.09.17</p>	Yes	See Report of Examination Issue 06: Tranent Cluster recommended post-examination modification no.12 (as above)
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**HADDINGTON**

Table HN1	Not in MIR	Gifford Garage	Housing - 10		The site is not known to be at risk of flooding	No	<p>See Report of Examination Issue 07: Haddington Cluster recommended post-examination modification no.5:</p> <p><i>In paragraph 2.127, inserting third and fourth sentences as follows:</i></p> <p><i>“Since they were previously allocated, these sites may be affected by legislative and regulatory changes, as well as identified changes to the physical environment including updated flood risk mapping. Up to date information, including flood risk assessment where necessary, will require to be submitted to ensure compliance with current legislation and the policy provisions of the plan.”</i></p>
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DUNBAR							
DR3	Yes	Hallhill Healthy Living Centre Expansion Land			There are a number of small drains in the area and these may be culverted through the site although we have no details. Should culverted watercourses be located on site then there should be no development over the top of them. The flood risk from surface water including run-off from adjoining land should be assessed as part of a Surface Water Drainage Assessment which may be required prior to commencement of works on site	No - surface water drainage assessment required	See Report of Examination Issue 08: Dunbar Cluster recommended post-examination modification no.1:  <i>In paragraph 2.139, adding the following sentences at the end:</i>  <i>“Should any culverted watercourses be found on the site, there should be no development on top of them. Advice should be sought from SEPA in respect of any planning applications.”</i>
Table DR1	Committed (lapsed)	Abbeylands	Housing - 16		The site is not known to be at risk of flooding	No	See Report of Examination Issue 08: Dunbar Cluster recommended post-examination modification no.2:  <i>In paragraph 2.149, inserting third and fourth sentences as follows:</i> <i>“Since they were previously allocated, these sites may be affected by legislative and regulatory changes, as well as identified changes to the physical environment</i>



							<i>including updated flood risk mapping. Up-to-date information, including flood risk assessment where necessary, will require to be submitted to ensure compliance with current legislation and the policy provisions of the plan."</i>
Table DR1	Committed (lapsed)	Abbeylands Garage	Housing - 8		The site is not known to be at risk of flooding	No	See Report of Examination Issue 08: Dunbar Cluster recommended post-examination modification no.2 (as above)
Table DR1	Committed	Coastguard Site	Housing - 8		The site is not known to be at risk of flooding	No	See Report of Examination Issue 08: Dunbar Cluster recommended post-examination modification no.2 (as above)
Table DR1	Committed	Assembly Rooms	Housing - 8		The site is not known to be at risk of flooding	No	See Report of Examination Issue 08: Dunbar Cluster recommended post-examination modification no.2 (as above)
Table DR1	Committed (lapsed)	Tynninghame Links	Housing - 7		Flood risk assessment required for small watercourse on southern boundary of site. This should include assessment of any structures or culverted sections of channel including the flood risk should these become blocked. The SEPA flood map shows potential Surface Water flood risk. ELC	Yes	See Report of Examination Issue 08: Dunbar Cluster recommended post-examination modification no.2 (as above)

					will require a Flood Risk Assessment and a Surface Water Drainage Assessment - Appl. 14/00802/P - granted 08.01.15		
Table DR1	Pending decision	Pleasance Farm	Housing - 19		The site is not known to be at risk of flooding - Appl. 16/00618/P - pending	No	See Report of Examination Issue 08: Dunbar Cluster recommended post-examination modification no.2 (as above)
Table DR1	Lapsed	Dairy Cottage, Thurston	Housing - 11		The site is not known to be at risk of flooding - Appl. 16/00618/P - pending	No	See Report of Examination Issue 08: Dunbar Cluster recommended post-examination modification no.2 (as above)
<b>NORTH BERWICK</b>							
NK2	Part of committed site	North Berwick High School and Law Primary School Expansion Land	Education		The SEPA flood map shows potential Surface Water flood risk. ELC may require a Surface Water Drainage Assessment prior to the commencement of development	No	N/A

Table NK1	Committed (lapsed)	New Mains	Housing - 6		Flood risk assessment required for Eel Burn on southern boundary of site. This should include assessment of any structures or culverted sections of channel including the flood risk should these become blocked. The SEPA flood map shows potential Surface Water flood risk. ELC will require a Flood Risk Assessment and Surface Water Drainage Assessment - Appl. 10/00527/P granted 12.04.12	Yes	See Report of Examination Issue 09: North Berwick Cluster recommended post-examination modification no.3:  <i>In paragraph 2.172, inserting third and fourth sentences as follows:</i>  <i>“Since they were previously allocated, these sites may be affected by legislative and regulatory changes, as well as identified changes to the physical environment including updated flood risk mapping. Up to date information, including flood risk assessment where necessary, will require to be submitted to ensure compliance with current legislation and the policy provisions of the plan.”</i>
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