

**Aberdeen City Council
Local Development Plan**

Strategic Flood Risk Assessment

Working Document

Version	Date Updated
1	August 2013
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1. Introduction

Strategic Flood Risk Assessment (SFRA) is designed for the purposes of informing the development planning process and to assist in achieving a flood risk reduction by avoiding areas at significant risk of flooding.

SFRA is a strategic overview of flood risk to the development plan area and involves the collection, analysis and presentation of all existing and readily derivable information on flood risk sources. It has been produced in consultation with the Scottish Environmental Protection Agency (SEPA) as well as other Council services.

This SFRA has been prepared to assist the preparation of the Local Development Plan 2016, particularly in regards to making decisions about preferred site allocations. It will also contribute to baseline monitoring for SEA, assist in policy development and enable the planning of new flood management schemes.

2. Legislation and Policy

Carrying out SFRA helps the Council to satisfy the requirements placed on local authorities under section 1 of the Flood Risk Management (Scotland) Act 2009 ('the Act'). Section 1 of the Act requires Local Authorities to exercise their functions with a view to reducing overall flood risk and promoting sustainable flood risk management.

By 2015, the Act requires that Flood Risk Management Plans (FRMPs) are required to be prepared for each Local Plan District in Scotland, which need be taken into account when preparing future Local Development Plans. Aberdeenshire Council is the lead authority for producing the Local Flood Risk Management Plan for the North East district. It is not anticipated that this will be complete before the adoption of the second Aberdeen Local Development Plan, which is expected to be in 2016.

3. Aims and Objectives

The primary aim of the SFRA is to guide the emerging Local Development Plan to ensure that future development is directed to areas of little or no flood risk wherever possible and does not increase flood risk elsewhere, for example, by affecting the storage or conveyance capacity of flood plains. Its main objectives are:

- To identify flood risk areas based on the Flood Risk Framework identified in Scottish Planning Policy, helping to determine the appropriate planning response to development proposals in these areas;

- To identify functional flood plain areas (even if already developed) to help ensure that development on these areas does not increase the risk of flooding elsewhere;
- Provide an evidence-based report on flooding and drainage issues to contribute to the production of the Main Issues Report and emerging LDP;
- To contribute to the Monitoring Report and baseline for the Strategic Environmental Assessment.

4. Sources

This report has been prepared with reference to ‘Strategic Flood Risk Assessment- Technical Guidance to Support Development Planning’, a guidance document published by SEPA in June 2012. This guidance suggests a number of potential sources of information on flood risk which may be examined for the report. Those considered most useful for the Aberdeen City context are:

- SEPA Flood Extent Maps¹;
- SEPA National Flood Risk Assessment²;
- Previous Aberdeen City Council Biennial Reports on the prevention or mitigation of flooding in Aberdeen - the last Biennial Report was produced in 2009;
- Previous flood risk studies;
- GIS Layers including flood extents, watercourses and reservoirs, flooding incidents etc;
- Information on Flood Prevention Schemes in Aberdeen.

Note on SEPA Flood Maps

The key sources of evidence are the Indicative Flood Extent Maps produced by SEPA, which show different levels of flood risk for rivers and the coast. Updated maps became available during 2014 and the high-level assessment of flood risk included in this document is informed by these maps.

It should be noted that the Flood Maps do not show very small watercourses (those with a catchment area of less than 3km²) and do not take account of the effect of any flood defences or hydraulic structures which may be present. The maps do not show cumulative effects from different sources of flooding.

SEPA’s flood hazard maps are designed to give a high-level indication of potential flood risk, but do not imply complete accuracy or certainty.

Note on National Flood Risk Assessment

The National Flood Risk Assessment (NFRA) identifies those areas of Scotland which are most vulnerable to flooding, taking into account the likelihood of flooding from all sources and the potential impact on people,

¹ SEPA Flood Maps Available at: http://www.sepa.org.uk/flooding/flood_extent_maps.aspx

² Further information on the NFRA is available at: http://www.sepa.org.uk/flooding/flood_risk_management/national_flood_risk_assessment.aspx

property and the environment. Although it is primarily intended to inform the production of the new Flood Risk Management Plans, it also provides useful, albeit high-level, information for land use planning and the SFRA.

The NFRA classifies catchment units according to flood risk from 'Very Low' to 'Very High'. All units classified 'Medium' or above are designated as Potential Vulnerable Areas (PVAs). 5 units in Aberdeen City, covering most of the local authority area, are classified as PVAs. Datasheets are produced for each PVA and these provide a high-level indication of why the areas were designated as being at risk, details of the sources of flooding within it, and impacts predicted. The datasheets can be found in the Appendix at the end of this report.

As and when new or updated information becomes available, this document will be updated to reflect any changes.

5. Evidence of Flood Risk in Aberdeen

There are 6 main potential sources of flood risk: rivers (fluvial), the sea (coastal), surface water (pluvial), groundwater, drainage and sewers and infrastructure failure (e.g reservoir or canal breaches). This report now examines the flood risk posed to the ALDP area from each of these sources.

5.1 Fluvial and Coastal

There is over 600km of watercourses (both open and culverted) in Aberdeen City (Map 1). Many of these are small watercourses which are not identified by the SEPA maps, but may still be vulnerable to localised flooding, particularly where blockages occur. It is important to consider the presence of small watercourses when assessing flood risk on individual sites.

SEPA's flood hazard maps (available online at http://www.sepa.org.uk/flooding/flood_maps.aspx) show the areas identified as being at risk of flooding from fluvial, coastal and surface water sources. For the purposes of planning, we are chiefly concerned with areas affected by a 0.5% annual probability of flooding (1 in 200 years).

The main areas at high flood risk in Aberdeen are along the large watercourses, including the River Dee, River Don and the Denburn and the coast and harbour-side area.

5.2 Pluvial (Surface Water) and Rising Groundwater

Pluvial flooding, or flooding due to excess surface water, occurs after periods of intense and prolonged rainfall which saturate either the natural substrate or urban drainage systems, so excess water cannot be safely drained away. Therefore, pluvial flooding is more likely to occur where the ground is naturally poorly drained or has been developed without adequate urban drainage systems in place.

SEPA has produced maps showing flood risk from surface water at a national level. This map is available from SEPA and gives some indication that areas in Aberdeen may be at risk from pluvial flooding. However, the map should be treated with caution and it is recommended that advice is sought from SEPA with regards to pluvial flood risk on specific sites.

Flooding due to rising groundwater is also likely to occur after periods of intense and prolonged rainfall, when the water table rises above normal levels. Groundwater flooding is most likely to occur in low lying areas which are underlain by permeable rocks such as chalk, sandstone, or localised sands and gravels. Therefore, information on underlying geology may give an indication if a site is prone to groundwater flooding.³

Map 5 gives a broad indication of vulnerability to groundwater flooding. The PVA datasheets also give an indication of which catchment units may be at risk from rising groundwater; this type of flooding has the potential to affect a large part of the Aberdeen City Area.

5.3 Roads Drainage and Sewers

Roadside drains, sewers and culverts can also be the cause of flood events if they fail, become blocked or are inundated with water that exceeds their capacity. Many of the flood incident points shown on Map 6 occurred as a result of blocked drains, gullies, culverts and other small watercourses. These occurred all across the city, although 'hotspots' may be identified.

Flooding due to blocked drains is addressed by Roads Maintenance. There is also a regime for the inspection of open watercourses in place, and hecks (debris screens) are inspected on a monthly basis and before anticipated high level rainfall.

5.4 Infrastructure Failure

There is not considered to be any significant risk of flooding due to infrastructure failure in Aberdeen. Although a number of reservoirs and canals do exist in and around the urban area, there are no large dams or levees and no records of previous flooding of this type. Flooding may also occur as a result of burst water mains, however these are the responsibility of Scottish Water and it is not possible to predict these events.

See Map 7 for a map of reservoirs in Aberdeen, of which there are very few. The majority of these are located in the Deeside area.

6. Identification of Functional Floodplain Areas

Map 8 shows the flood extents for the River Dee, for a 75 year return period. This may provide an indication of the functional floodplain of the River Dee. It was not possible to obtain a similar map for the River Don, although the SEPA

³ The UK Groundwater Forum provides information about groundwater flooding. Further information can be found at www.groundwateruk.org

Flood Extent Maps provide a similar picture. Further guidance should be sought from SEPA when attempting to identify whether a site is on the functional floodplain.

7. Significant Historical Flooding Events in Aberdeen

Council Committee Reports and media reports provide a useful source of information on significant flooding events experienced in Aberdeen.

- September 2009 – Weeks of solid rain in the North East resulted in heavy flooding in parts of Aberdeen, many properties affected had previously been flooded, highlighting their vulnerability.
- 25 August 2012 (see *Committee Report EPI 12 240, 6 November 2012*) - On this date, Aberdeen experienced a localised, intense rainfall event of relatively short duration. It is believed that up to 30mm fell within one hour, meaning the downpour was at least a 1 in 100 year event. This gave rise to a number of flooding incidents across the city, affecting both commercial and residential properties, as well as disrupting travel. The full Committee Report details all of the recorded flooding incidents for this day.⁴
- November 2012 – The coastal village of Footdee was engulfed in sea foam after intense storms swept Aberdeen. The foam caused a good deal of damage and nuisance, and required a large expenditure on clean up operations.

8. Existing Flood Defence Schemes

Flood Prevention Schemes currently in place or under construction in Aberdeen include:

- Glashieburn, Bridge of Don close to Lochside Drive
- Fraser Road, to the north of Hutcheon Street
- Gilcomston Burn
- West Cults Farm (private scheme)
- Jacks Brae
- Aberdeen Beach Recharge- To protect the revetments and the area around Aberdeen beach from continued erosion and failure, a programme of beach recharge took place in July and August 2006. To ensure the stability of the new beach and to protect the area from

⁴ Committee Report available online at: <http://committees.aberdeencity.gov.uk/mqConvert2PDF.aspx?ID=22719>

further erosion, rock t-head extensions to the present timber groynes were constructed.

Retention Basins

Areas are currently being identified by the Council for upstream retention basins to help reduce run-off further downstream and prevent flooding in the more built up areas of the City. These areas will be identified through the next Local Development Plan and safeguarded from development.

9. The Impacts of Climate Change on flood risk

It is widely anticipated that future changes in climate will lead to more intense storm events, of increasing frequency, which may have significant impacts for flooding.

The [Aberdeen Climate Change Action Plan 2002](#)⁵ contains a number of predictions for the effects of Climate Change on the North East of Scotland, using the UK Climate Projections 2002. Many of these may have implications for flooding, including:

- In winter the North East could experience up to 10% increase in rainfall in the next 20 years and by 2080 between 20–30%.
- By the 2080s, heavy winter rain intensities, that are currently experienced around once every two years, may become between 15% and 20% heavier.
- For some UK east coast locations, extreme sea levels could occur between 10 and 20 times more frequently by the 2080s than they do now, under the Medium-High Emissions scenario.
- Even accounting for natural vertical land rise in the North East (+0.7mm/yr), by the 2080s, sea level may be between 1 cm (Low Emissions scenario) and 61cm above (High Emissions scenario) the current level- potentially increasing flooding during winter and storm periods from both flooding and the sea.

The Action Plan is in the process of being updated by ACC using the latest UK Climate Projections, when this is available, this document will be updated.

10. Assessment of Site Options According to Flood Risk

The main aim of collecting the evidence in section 1 of the SFRA is to assist in directing development to areas of little or no flood risk wherever possible, referring to the Flood Risk Framework contained in Scottish Planning Policy (2010). The following assessment is for preferred Opportunity Sites in the LDP Proposed Plan. These are sites which have been carried forward from the

⁵ Aberdeen Climate Change Action Plan 2002 Executive Summary can be found online at: <http://committees.aberdeencity.gov.uk/mgConvert2PDF.aspx?ID=22719>

existing LDP, as well as new sites which have been identified through the review process.

We have based our flood risk assessment on information and advice provided by SEPA in their responses to the Main Issues Report and draft Proposed Plan. These responses included advice on flood risk on a site-by-site basis for all our preferred and alternative options. SEPA's advice is based on the 2014 Flood Hazard Maps(fluvial and coastal) and pluvial flood maps.

The flood risk category into which a site falls is identified using the following annual flood probabilities:

- Little or No Risk – annual flooding probability less than 0.1% (1:1000)
- Low to Medium Risk – annual flooding probability between 0.1 and 0.5% (between 1:1000 and 1:200), or site adjacent to but not within a medium to high risk area.
- Medium to high risk – annual probability 0.5% (1:200) or greater.

The table below shows a high-level assessment of flood risk on a site by site basis.

In their response to the Main Issues Report, SEPA indicated that there are no preferred sites where the principle of development appears to be compromised as a result of flood risk information.

The justification for the inclusion of each site in the LDP is that they are required to meet the future housing, employment and community development needs for Aberdeen.

Sources used or referred to during the preparation of this report:

Aberdeen City Council Reports

Climate Change Action Plan 2002
Committee Report EPI 12 240 'City Wide Flooding Issues' 6 Nov 2012
6th and 7th Flood Prevention Biennial Reports (2008/2009)

Aberdeen City Council GIS resources

Watercourses and Reservoirs
Flood Incidents
Groundwater Vulnerability

SEPA Resources

Flood Extent Maps
National Flood Risk Assessment- Potentially Vulnerable Areas

Other sources

UK Groundwater Forum www.ukgroundwater.co.uk

Useful Contacts:

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OP	Site Name	SEPA Flood Map Fluvial Flooding Category				SEPA Flood Map Coastal Flooding Category				Other Sources			Proposed Use	1. Risk 2. Justification 3. Mitigation
		Minimal	Low-Med or adj. to M-H	Med-High (Undevel)	Med-High (Built Up)	Minimal	Low-Med or adj. to M-H	Med-High (Undevel)	Med-High (Built Up)	Ground Water	Surface Water	Small Watercourses & Culverts		
OP1	Murcar	X				X				N	N	N	Employment	1. Minimal flood risk.
OP2	Berryhill, Murcar				X	X				Y	Y	Y	Employment	1. Small part of site at med-high flood risk. Some flood risk from small watercourses, groundwater and surface water. 3. Flood Risk Assessment required. DIA recommended.
OP3	Findlay Farm, Murcar	X				X				N	Y	N	Employment	1. Some risk of surface water flooding, overall minimal risk. 3. DIA recommended.
OP4	Dubford Community Facilities	X				X				N	Y	N	Local facilities	1. Some risk of surface water flooding, overall minimal risk. 3. DIA recommended.
OP5	Balgownie Centre	X				X				N	N	N	Residential	1. Minimal flood risk
OP6	Balgownie Primary School	X				X				N	N	N	Residential	1. Minimal flood risk
OP7	Aberdeen College Gordon Centre	X				X				N	Y	N	Residential	1. Some risk of surface water flooding, overall minimal risk. 3. DIA recommended.
OP8	East Woodcroft North	X				X				N	N	N	Residential	1. Minimal flood risk
OP9	Grandhome		X			X				N	Y	N	Residential, employment	1. Adjacent to med-high flood risk areas, but topography shows unlikely. Some risk of surface water flooding, but overall minimal risk. 3. DIA recommended.
OP10	Dubford				X	X				N	N	N	Residential	1. Part of site is at med-high risk from fluvial sources. Some historical accounts of flooding on site. 3. Flood Risk Assessment required.
OP11	Balgownie Home Farm	X				X				N	Y	N	Mixed Use	1. Some risk of surface water flooding, overall minimal risk. 3. DIA recommended.
OP12	Former One Sports Centre	X				X				N	Y	N	Mixed Use	1. Some risk of surface water flooding, overall minimal risk. 3. DIA recommended.
OP13	AECC Bridge of Don	X				X				N	Y	Y	Residential	1. Some risk of flooding from surface water and small watercourses/blockages. 3. Drainage Assessment recommended.
OP14	Bankhead Academy	X				X				N	N	N	Residential	1. Minimal flood risk
OP15	Carden School	X				X				N	N	N	Residential	1. Minimal flood risk
OP16	Mugiemoss Mill				X	X				N	N	N	Mixed Use	1. Part of site at med-high flood risk from fluvial sources (River Don). 3. Flood Risk Assessment required.
OP17	Stoneywood				X	X				N	N	Y	Residential	1. Part of site at med-high risk from fluvial sources (Don and Green Burn) and small watercourses also present. 3. Flood Risk Assessment required.
OP18	Craibstone North & Walton Farm				X	X				N	Y	N	Employment	1. Part of site at med-high flood risk (Green Burn). Also some risk of surface water flooding 3. Flood Risk Assessment required. DIA recommended.
OP19	Rowett North				X	X				Y	Y	Y	Employment	1. Part of site at med-high flood risk (Green Burn). Also some risk of flooding from groundwater, surface water and small watercourses. 3. Flood Risk Assessment required. DIA recommended.
OP20	Craibstone South	X				X				N	N	Y	Residential	1. Some small watercourses on site but overall minimal flood risk.
OP21	Rowett South	X				X				N	N	Y	Residential	1. Some small watercourses on site but overall minimal flood risk.
OP22	Greenferns Landward	X				X				N	N	Y	Residential	1. Some small watercourses on site but overall minimal flood risk.
OP23	Dyce Drive	X				X				Y	Y	Y	Employment	1. Some flood risk from small watercourses, groundwater and surface water. 3. Flood Risk Assessment required. DIA recommended.
OP24	A96 Park and Ride	X				X				Y	Y	Y	Land for Transport	1. Some flood risk from small watercourses, groundwater and surface water. 3. Flood Risk Assessment required. DIA recommended.
OP25	Woodside				X	X				N	Y	Y	Residential	1. Part of site at med-high flood risk from fluvial sources (River Don). Also some risk from surface water and small watercourses. 3. Flood Risk Assessment required. DIA recommended.
OP26	Auchmill Golf Course	X				X				N	N	N	Golf Course	1. Minimal flood risk
OP27	Greenfern Infant School	X				X				N	N	N	Residential	1. Minimal flood risk
OP28	Greenferns		X			X				N	Y	Y	Residential, Employment	1. Adjacent to area at medium-high risk from fluvial sources (Bucks Burn). Also some risk from surface water and small watercourses. 3. Flood Risk Assessment required; DIA recommended.
OP29	Prime Four	X				X				N	N	Y	Employment	1. Some small watercourses present but overall minimal flood risk.
OP30	West Huxterstone	X				X				N	N	Y	Residential	1. Record of flooding from Den Burn close to this site. Also some other risk from small watercourses. 3. Flood Risk Assessment required.
OP31	Maidencraig South East		X			X				N	N	Y	Residential	1. Adjacent to area at high-med risk from fluvial sources (Den Burn) and some small watercourses also present. However topography suggests flooding unlikely.
OP32	Maidencraig North East	X				X				N	N	N	Residential	1. Minimal flood risk
OP33	Greenferns		X			X				N	Y	Y	Residential, employment	1. Adjacent to area at medium-high risk (Bucks Burn). Also some risk from surface water and small watercourses. 3. Flood Risk Assessment required. DIA recommended.
OP34	East Arnhall				X	X				N	N	N	Residential	1. Part of site at med-high flood risk from fluvial sources (Brodiaich Burn). 3. Flood Risk Assessment required.
OP35	Granitehill Road	X				X				N	Y	N	Museum Storage	1. Some risk of surface water flooding, overall minimal risk. 3. DIA recommended.

OP36	Charlie House				X	X				N	N	N	Children's Hospice	1. Southernmost part of site at med-high risk of fluvial flooding from fluvial sources. 3. Development should be limited to areas not at flood risk. FRA required.
OP37	Burnside Centre	X				X				N	Y	N	Residential	1. Some risk of surface water flooding, overall minimal risk. 3. DIA recommended.
OP38	Countesswells	X				X				N	Y	Y	Residential, employment	1. Some flood risk from small watercourses and surface water. 3. Flood Risk Assessment required. DIA recommended.
OP39	Braeside Infant School	X				X				N	N	N	Residential	1. Minimal flood risk
OP40	Cults Pumping Station		X			X				N	N	N	Residential	1. Adjacent to an area of med- high risk from fluvial sources (Cults Burn) but overall minimal risk.
OP41	Friarsfield					X	X			N	Y	N	Residential	1. Part of site at med-high flood risk from fluvial. Also some risk of surface water flooding. 3. Flood Risk Assessment required. DIA recommended.
OP42	Kennerty Mill					X	X			N	N	N	Residential	1. Part of site at med-high flood risk from fluvial sources (Culter Burn) 3. Flood Risk Assessment required.
OP43	Milltimber Primary School	X				X				N	N	Y	Residential	1. Some flood risk from small watercourses. 3. Flood Risk Assessment required.
OP44	North Lasts Quarry			X		X				N	Y	N	Quarry	1. Small part of site at med-high flood risk (fluvial sources) and some risk of surface water flooding. 3. Flood Risk Assessment required. DIA recommended.
OP45	Peterculter East	X				X				N	Y	Y	Residential	1. Some risk of flooding from surface water and small watercourses however overall minimal flood risk.
OP46	Culter House Road	X				X				N	N	Y	Residential	1. Some flood risk from small watercourses and culverts. 3. Flood Risk Assessment required.
OP47	Edgehill Road	X				X				N	N	Y	Residential	1. Some flood risk from small watercourses and culverts. 3. Flood Risk Assessment required.
OP48	Oldfold	X				X				N	Y	Y	Residential, employment	1. Some flood risk from small watercourses and surface water. 3. Flood Risk Assessment required. DIA recommended.
OP49	Grove Nursery	X				X				N	N	Y	Recycling Centre	1. Some flood risk from small watercourses and issues recorded nearby with blocked channels 3. Flood Risk Assessment required
OP50	Skene Road Hazlehead	X				X				N	Y	Y	Cemetery	1. Some flood risk from small watercourses and surface water. 3. DIA recommended.
OP51	Peterculter Burn					X	X			N	N	Y	Residential	1. Part of site at med-high risk of flooding from fluvial sources (Culter Burn). Some small watercourses on site. 3. Flood Risk Assessment required.
OP52	Malcolm Road	X				X				Y	Y	Y	Residential	1. Some risk of flooding from groundwater, surface water and small watercourses. 3. FRA required; DIA recommended.
OP53	Aberdeen Gateway	X				X				N	Y	Y	Employment	1. Some risk from surface water and small watercourses. 3. DIA recommended.
OP54	Altens East and Doonies	X				X				N	Y	N	Waste Management	1. Some risk from surface water, overall minimal risk. 3. DIA recommended.
OP55	Blackhills Quarry Cove	X				X				N	Y	N	Quarry	1. Some risk from surface water, overall minimal risk. 3. DIA recommended.
OP56	Cove	X				X				N	Y	N	Residential	1. Some risk from surface water, overall minimal risk. 3. DIA recommended.
OP57	Craighill Primary School	X				X				N	N	N	Residential	1. Minimal flood risk
OP58	Stationfields Cove	X				X				N	N	N	Residential	1. Minimal flood risk
OP59	Loirston	X				X				Y	Y	Y	Residential, employment	1. Some flood risk from small watercourses, groundwater and surface water. 3. Flood Risk Assessment required. DIA recommended.
OP60	Charleston	X				X				N	Y	Y	Employment	1. Some flood risk from small watercourses and surface water. 3. Flood Risk Assessment required. DIA recommended.
OP61	Calder Park	X				X				N	Y	Y	New Academy	1. Small flood risk from small watercourses and culvert. 3. Flood Risk Assessment required; DIA recommended.
OP62	Aberdeen Harbour Expansion	X						X		N	N	N	Harbour	1. Whole site at med-high risk of coastal flooding. 2. Harbour uses require coastal location. 3. Flood Risk Assessment required.
OP63	Prime Four Phase 5	X				X				N	Y	N	Employment	1. Steep slope with potential for surface water flooding. 3. DIA recommended.
OP64	Ness Solar Farm	X				X				N	Y	N	Solar Farm	1. Very small areas shown to be at surface water flood risk. Overall minimal flood risk.
OP65	Haudaugain Triangle	X				X				N	Y	N	Retail Park	1. Some risk from surface water, overall minimal risk. 3. DIA recommended.
OP66	Manor Walk	X				X				N	Y	Y	Residential	1. Some risk from surface water and small watercourses. 3. DIA recommended.
OP67	Aberdeen Market					X		X		N	N	N	Retail Core	1. All of site at med-high flood risk from fluvial & coastal sources. However no record of flooding on site so overall considered to be low flood risk.
OP68	1 Western Road	X				X				N	Y	N	Residential	1. Some risk from surface water, overall minimal risk. 3. DIA recommended.
OP69	140 Causewayend		X			X				N	N	N	Residential	1. Adjacent to area at med-high risk from fluvial sources.
OP70	35 Froghall Road	X				X				N	N	N	Residential	1. Minimal flood risk
OP71	41 Nelson Street	X				X				N	N	N	Residential	1. Minimal flood risk
OP72	Aberdon House	X				X				N	N	N	Residential	1. Minimal flood risk.
OP73	Balgownie Machine Centre	X				X				N	Y	N	Mixed Use	1. Some risk from surface water, overall minimal risk. 3. DIA recommended.
OP74	Broadford Works					X	X			N	N	Y	Mixed Use	1. Majority of site at med-high risk of flooding, according to 2014 maps. History of flood due to culverts and burst drains 3. Flood Risk Assessment required.
OP75	Denmore Road	X				X				N	Y	Y	Retail	1. May be some flood risk from surface water and small watercourses. 3. DIA recommended.

