LINCOLNSHIRE FLOOD RISK AND DRAINAGE MANAGEMENT PARTNERSHIP

Guiding Principles Note 1 (interim)

Duty to Investigate a Flood

Flood and Water Management Act 2010

Section 19 - Local authorities: investigations

(1) On becoming aware of a flood in its area, a lead local flood authority must, to the extent that it considers it necessary or appropriate, investigate—
(a) which risk management authorities have relevant flood risk management functions, and
(b) whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood.

(2) Where an authority carries out an investigation under subsection (1) it must—
(a) publish the results of its investigation, and
(b) notify any relevant risk management authorities.

Purpose of this document:

To provide the Partnership with "interim" criteria to assist the LLFA in deciding when to formally investigate a flood.

Contents: **Page**

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Overview of what is "necessary and appropriate"

The process for instigating "necessary or appropriate" flood investigation, as defined by Section 19 of the Flood and Water Management Act 2010, needs to be clear and uncomplicated. It is not appropriate or necessary to investigate everything. The process for deciding what to investigate therefore needs to be pragmatic.

In this context, necessary or appropriate may be determined by history (ie number of times previously occurred or frequency), scale (eg area, number of properties and/or people affected) and/or consequence (people displaced/stranded or danger to health etc).

The risk categories and indicators proposed are in accordance with those used in the Lincolnshire PFRA Appendix D: Local flood risk area vulnerability indicators template.

Human life category

The overriding criteria for deciding to investigate any flood must be risk to life in any risk category in Table 1 below.

Social risk category (residential property): The approach to residential properties representing the Social category should be considered in terms of type of property, depth of flooding and in some circumstances, duration. If only the garden of a property is flooded and no flood waters enter the living area, then the need to investigate the flood would not necessarily be considered "necessary or appropriate". There is evidence that a property could incur flood damage if water levels rise to within 300mm of finished floor level but this might be difficult to identify. A property situated close to a watercourse, such as a mill building, would expect to flood regularly and possibly not considered "necessary or appropriate" to investigate unless flooding causes a risk to life. How many properties which have internally flooded, before being considered to be necessary or appropriate, could be a contentious issue but, for this guidance, it has been decided that investigations would be necessary and appropriate for all residential properties flooded internally.

Critical Services risk category (hospitals, health centres, care homes etc, power/water services): By definition, the Critical Services category seems to be an obvious indicator to be included in full as described in Appendix D of the Lincolnshire PFRA, although there are some sites such as day nurseries and village halls which are not necessarily critical in all situations. To enable a pragmatic decision making process, all critical services or installations flooded internally or inaccessible due to a flood should be investigated.

Economic risk category (business premises, agricultural land, roads etc): There are elements within the Economic category, which would clearly have an impact on a local community, or potentially wider community, if unable to function because of flooding. These would include supermarkets, railways and railway stations, motorways and main roads also impacting on bus services. However, if a minor road is the only access to a small community and is impassable to a flood for an extended period then this could seriously impact on the community's ability to function. There are some businesses which can also be at the heart of a small community and the loss of their services, through flooding, can disrupt community life. For example investigation of flooding to manufacturing premises is likely to have an impact on the community and therefore internal flooding would be considered as "necessary and appropriate" to investigate. Whilst productive agricultural land begins to become waterlogged if water rises above 600mm below the surface, only prolonged surface flooding is proposed as appropriate for these investigations.

Environment risk category (Special Protection Areas, RAMSAR sites, Sites of Special Scientific Interest etc): It is more difficult to determine what is "necessary or appropriate" because for many environmental sites, the consequences of flooding could be positive or negative. Some habitats depend on seasonal flooding, although prolonged, deep, fast flowing or unusually extensive flooding might cause some damage. Flooding by polluted/contaminated water might also increase damage. A schedule of the consequences of flooding to the various designated environmental sites in Lincolnshire is being prepared, in conjunction with the relevant partners. For further advice contact your area highways manager.

Heritage Sites risk category: The Environmental risk category approach is also being adopted in the context of heritage sites. For further information contact http://www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/

Communicating the Investigation Reports

In order to comply with Part 2(1) of Section 19, the results of the investigations will be published the on the LLFA website.

Notification to Risk Management Authorities, in accordance with Part 2(2), will be through the Flood Risk and Drainage Groups at their regular meetings.

Table 1 The following impact criteria **should be considered** in deciding when to investigate a flood:

Risk Category and Indicator	Impact Criteria
Human Life	
Risk to loss of life	**ANY RISK TO LOSS OF LIFE**
Social	
Residential Property	**One or more properties flooded internally** above ground floor level and/or below ground level where used as basement living accommodation.
Critical Services/Installations and Vulnerable Persons	
Hospitals Health Centres/Clinics/Surgeries Pharmacies Schools/Colleges Day Nurseries Care/Nursing Homes Village & Town Halls/Rest Feeding Centres Police, Ambulance, Fire & Rescue Stations Power Services: (Electricity Stations/sub stations, Gas Stations) Water Services: Sewage Treatment Works & Sewerage Pumping Stations Water Treatment Works & Pumping Stations	**One or more properties flooded internally** above ground floor level and/or below ground level where used as basement living accommodation or for the provision of critical services; **and/or** **One or more properties rendered inoperable**, due to the access to the premises being impassable. **One or more flooded critical installations**, resulting in a loss of service impacting on the local community or causing pollution to internal premises.
Economic	
Shops/ supermarkets Manufacturing premises Offices Agricultural land grade 3 & above Motorways, main roads, minor roads Bus services/depots Railways/railway stations	**One or more properties flooded internally** above ground floor level and/or below ground level where used as basement operating space. **At least 2 ha flooded for more than 2 days.** Any section of a **national category 3 road or above made impassable** due to flooding; and/or flooding to a minor road cutting off effective access to a village, hamlet or blocking a designated bus route. **Flooding adversely impacting on normal timetables or cutting off a rail link**
Environment	
Special Protection Areas (SPAs) Special Areas of Conservation (SACs) RAMSAR Sites BAP Habitats Special Sites of Scientific Interest (SSSIs) Number of designated Local Nature Sites	The consequences of flooding could be positive or negative and a schedule of consequences of flooding to individual sites is being prepared. For further advice contact your area highways manager.
Cultural Heritage	
Number of World Heritage Sites Number of Listed Buildings Scheduled monuments Registered parks & gardens	A schedule of consequences of flooding to individual sites is being prepared. For further advice contact: http://www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/
Other	
MPs letter	Upon receipt of a formal letter from a Member of Parliament

Appendix 1 Roles and Responsibilities of Risk Management Authorities

The Department for Environment Flood and Rural Affairs (Defra) and the Welsh Assembly Government determine policy and are responsible for the management of flood risk at a government level. Implementation of the policy and delivery and operational activities are mainly shared between the Environment Agency (EA), local authorities and Internal Drainage Boards (IDBs).

Further information can be found on: http://www.defra.gov.uk/environment/

Environment Agency (EA)

The Environment Agency has the role of implementing government policy on flood risk, and has a strategic overview of coastal erosion and flooding from all sources.

The EA has responsibilities for their flood defences and powers and duties relating to the drainage, maintenance and operations of the main rivers. Its overall aim is to reduce the risk of flooding from main rivers and the sea. The EA has the duty to produce flood risk maps and issue flood warnings.

The EA develops a number of management plans to understand the threat of flooding, and plan for the sustainable management of those risks over the long-term. It is also a statutory consultee to the development planning process and certain planning applications that affect its interests.

Further information can be found on:

http://www.environment-agency.gov.uk/homeandleisure/floods/default.aspx

Lead Local Flood Authority (LLFA)

The Lead Local Flood Authority has a lead role and responsibility for local flood risk management in respect of surface water, groundwater and ordinary watercourses.

Further information can be found on:

http://www.lincolnshire.gov.uk/residents/environment-and-planning/flood-risk-management/the-lead-local-flood-authority/103754.article

Local authorities

Generally local authorities work in conjunction with the EA and the LLFA in respect of managing local flood risk from all sources. They do however; have surface water assets within their ownership and jurisdiction which are maintained and improved.

Local authorities coordinate local resilience and emergency planning in their area, including response to and recovery from major flood emergencies.

Maritime local authorities (ie Boston Borough Council, East Lindsey DC, South Holland DC) also have responsibilities to manage coastal erosion in partnership with the EA. They have the powers to maintain and improve ordinary watercourses and flood defences..

For further information contact the specific borough/district council.

Internal Drainage Boards

Where present, Internal Drainage Boards (IDBs) are responsible for maintenance, improvement and operation of drainage systems and regulation of watercourses within the internal drainage district, apart from the main rivers. Their main role is the close management of water levels – in watercourses or underground (groundwater) – for the purpose of reducing the risk from flooding and for sustaining all land uses and the environment.*(ADA – Vision for IDBs in England & Wales, September 2010).*
Further information can be found on:
http://www.ada.org.uk/

Sewerage undertakers

Sewerage undertakers are responsible for maintaining the public sewage systems, including sewers carrying surface water away from impermeable surfaces.

In flood conditions, the sewer systems can often become overloaded with a mixture of floodwater and sewage leading to overflow and flooding. Sewerage undertakers are responsible for the removal of surface water from impermeable surfaces through the sewer system. Where there is frequent and severe sewer flooding, sewerage undertakers are required to address this through their capital investment plans which are regulated by Ofwat

To prevent further flooding, water and sewer companies have a responsibility to: monitor the levels; prevent overloading sewer systems; maintain and repair pipes as necessary.

Further information can be found on:
http://www.anglianwater.co.uk/
http://www.stwater.co.uk/

Riparian owners

Riparian owners/ householders are responsible for maintaining private assets and these are usually minor drains, ditches, watercourses, pipes, culverts and bridges.

For further information download Environment Agency publication 'Living on the Edge':
http://publications.environment-agency.gov.uk/dispay.php?name=GEHO0407BMFL-E-E

Appendix 2.1 LLFA Process Diagram to Assist the Instigation of a Flood Investigation

On becoming aware of a flood the officer should use the template below for guidance. The flow chart in Appendix 2.2 will in determining if an investigation is necessary or appropriate.

Diagram 1 of 6

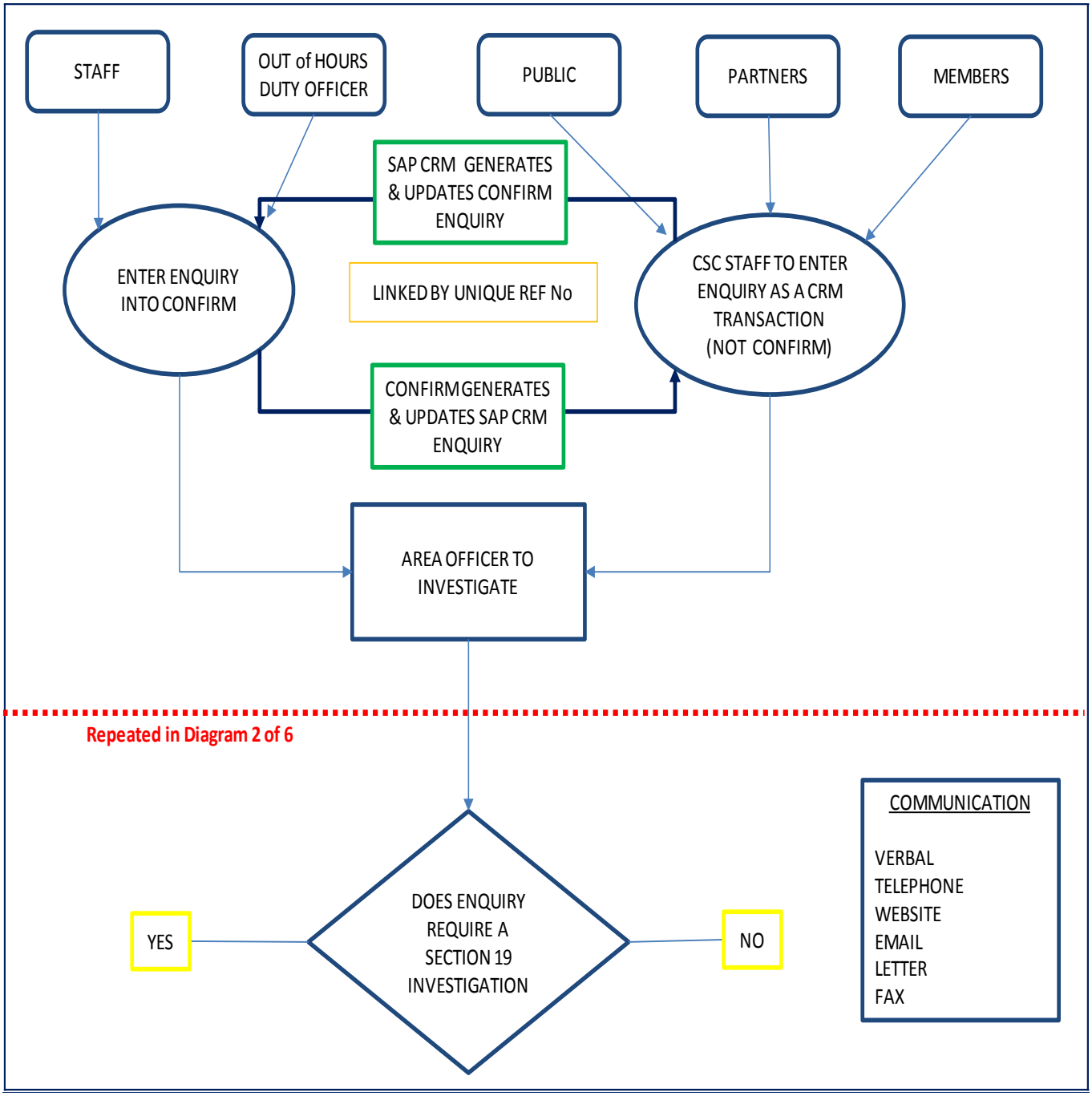


Diagram 2 of 6

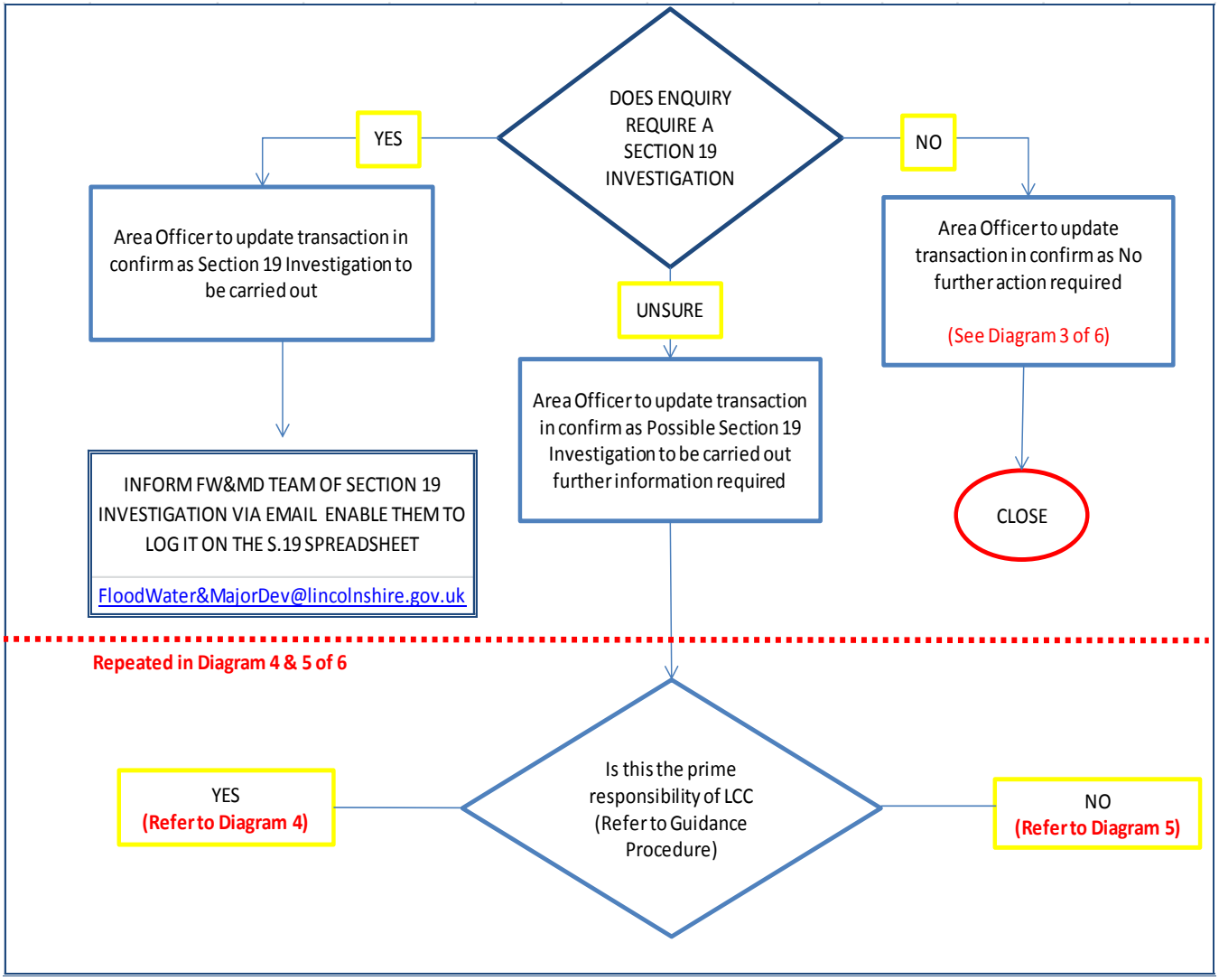


Diagram 3 of 6

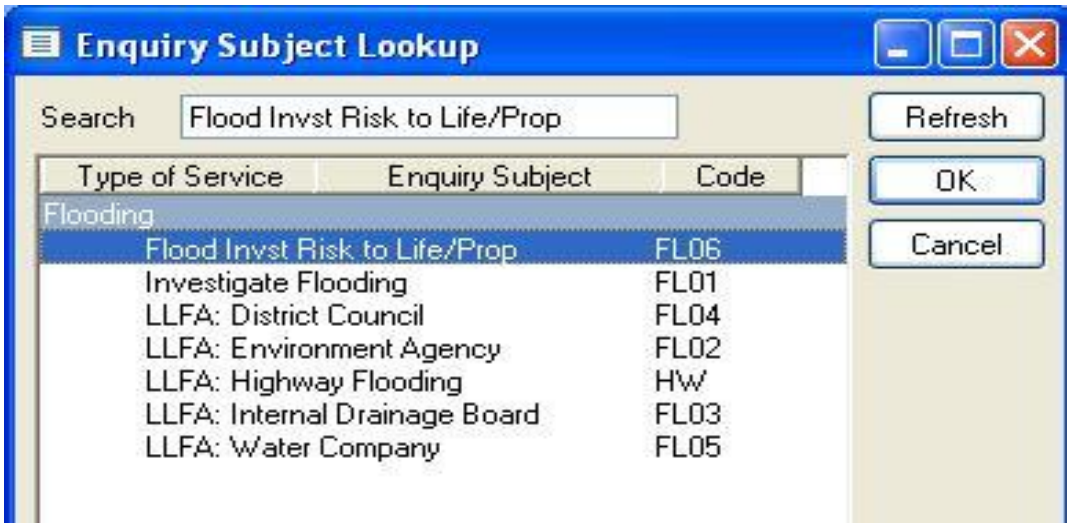
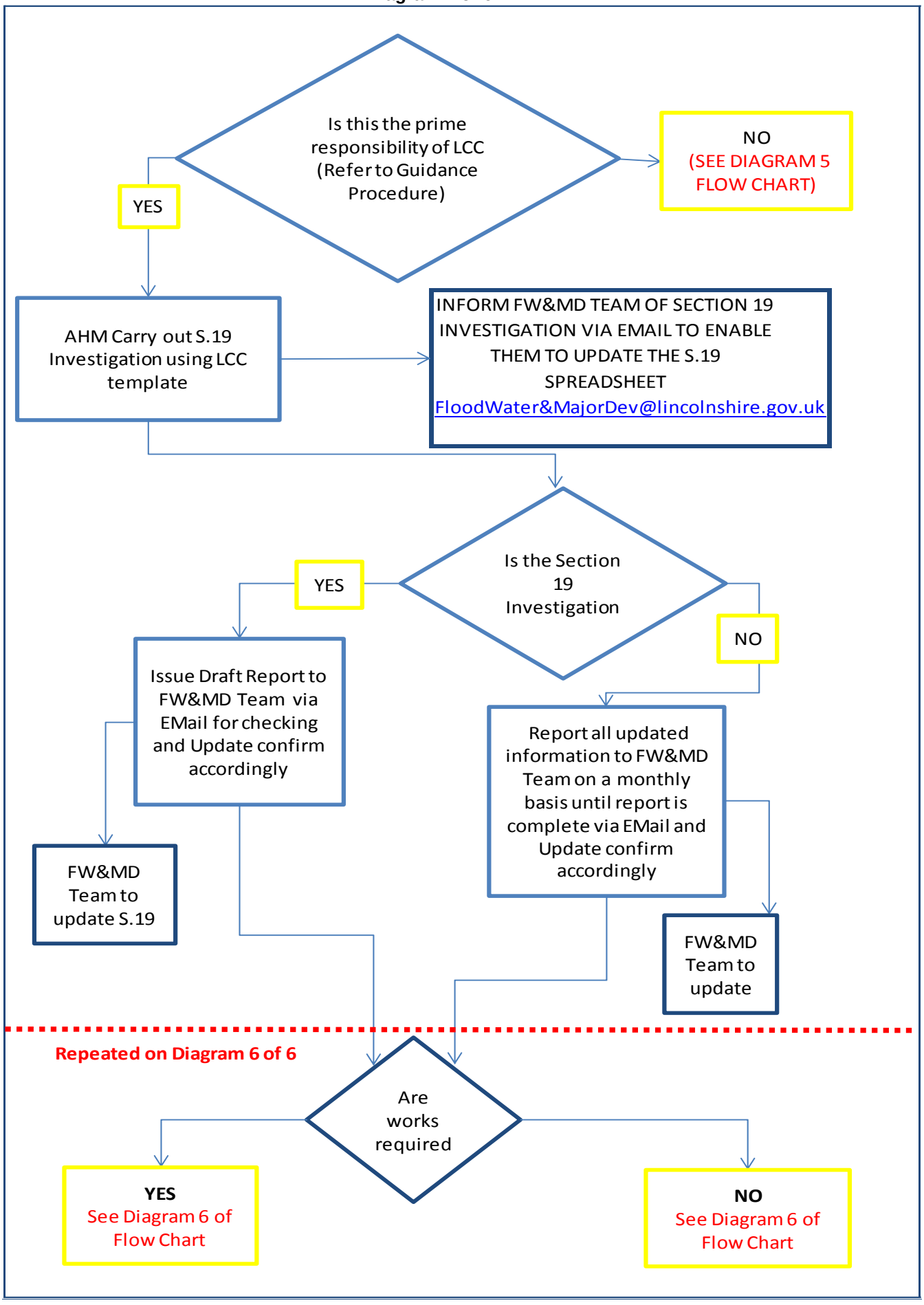
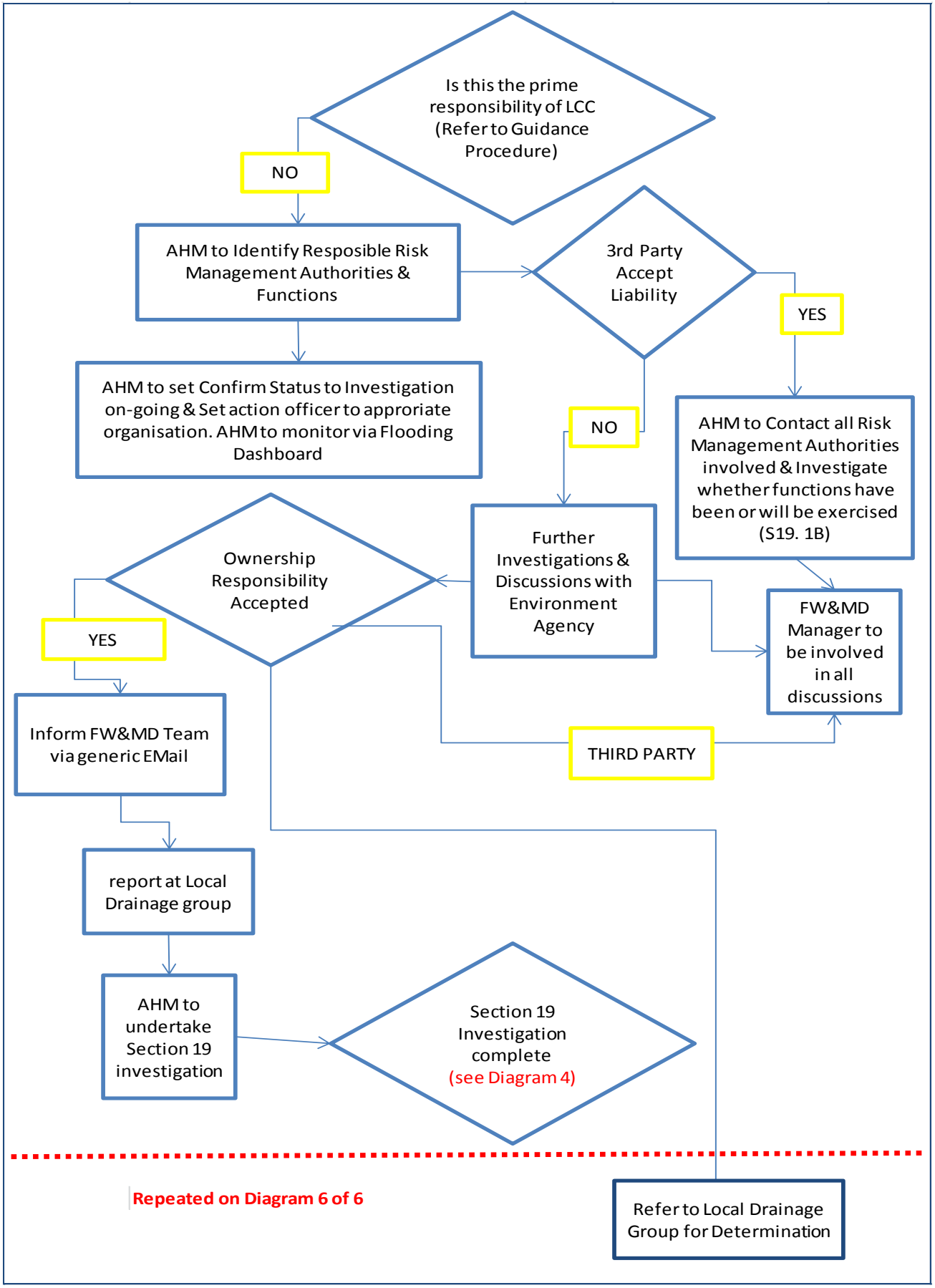


Diagram 4 of 6



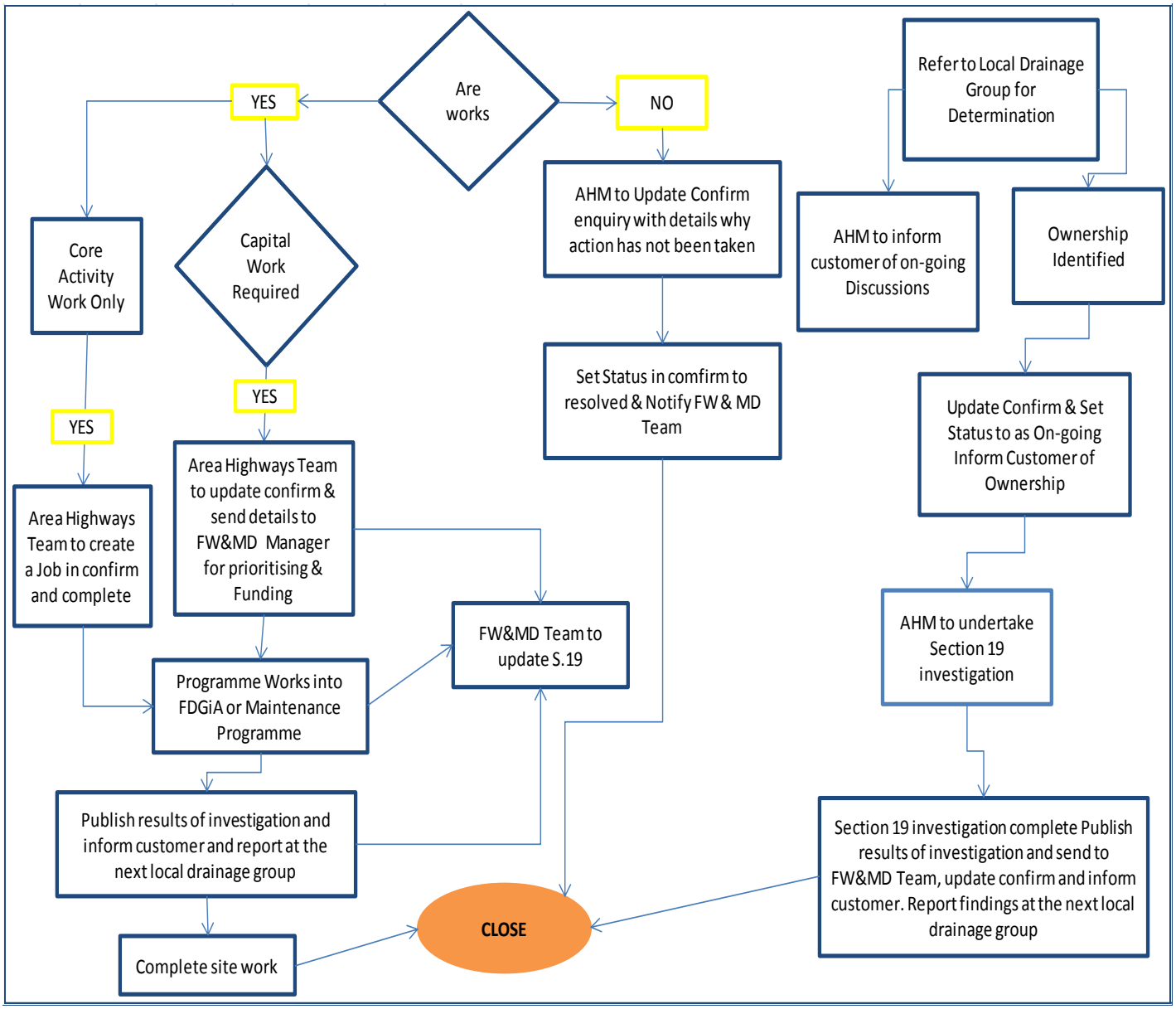
APPENDIX (d)

Diagram 5 of 6



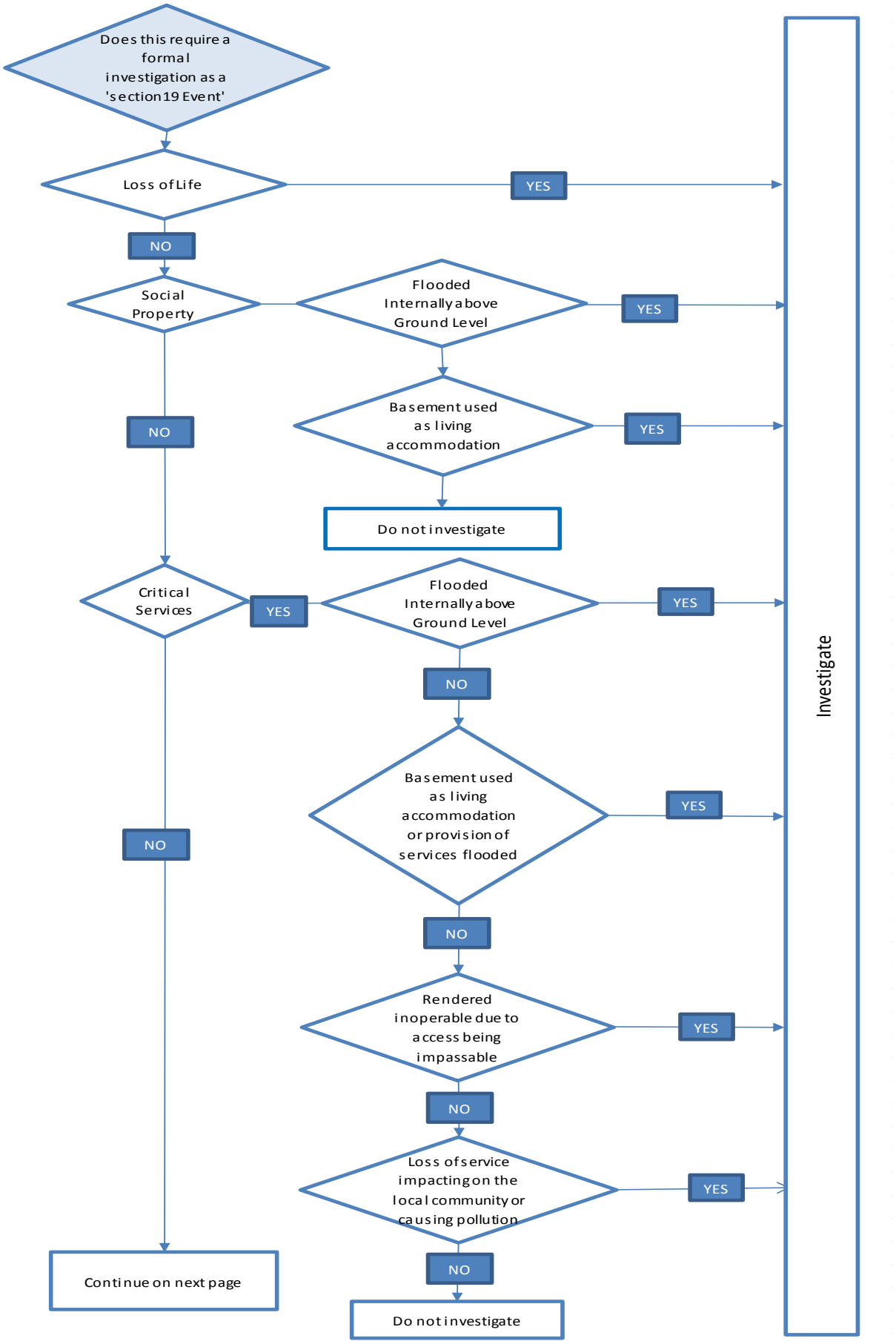
APPENDIX (d)

Diagram 6 of 6

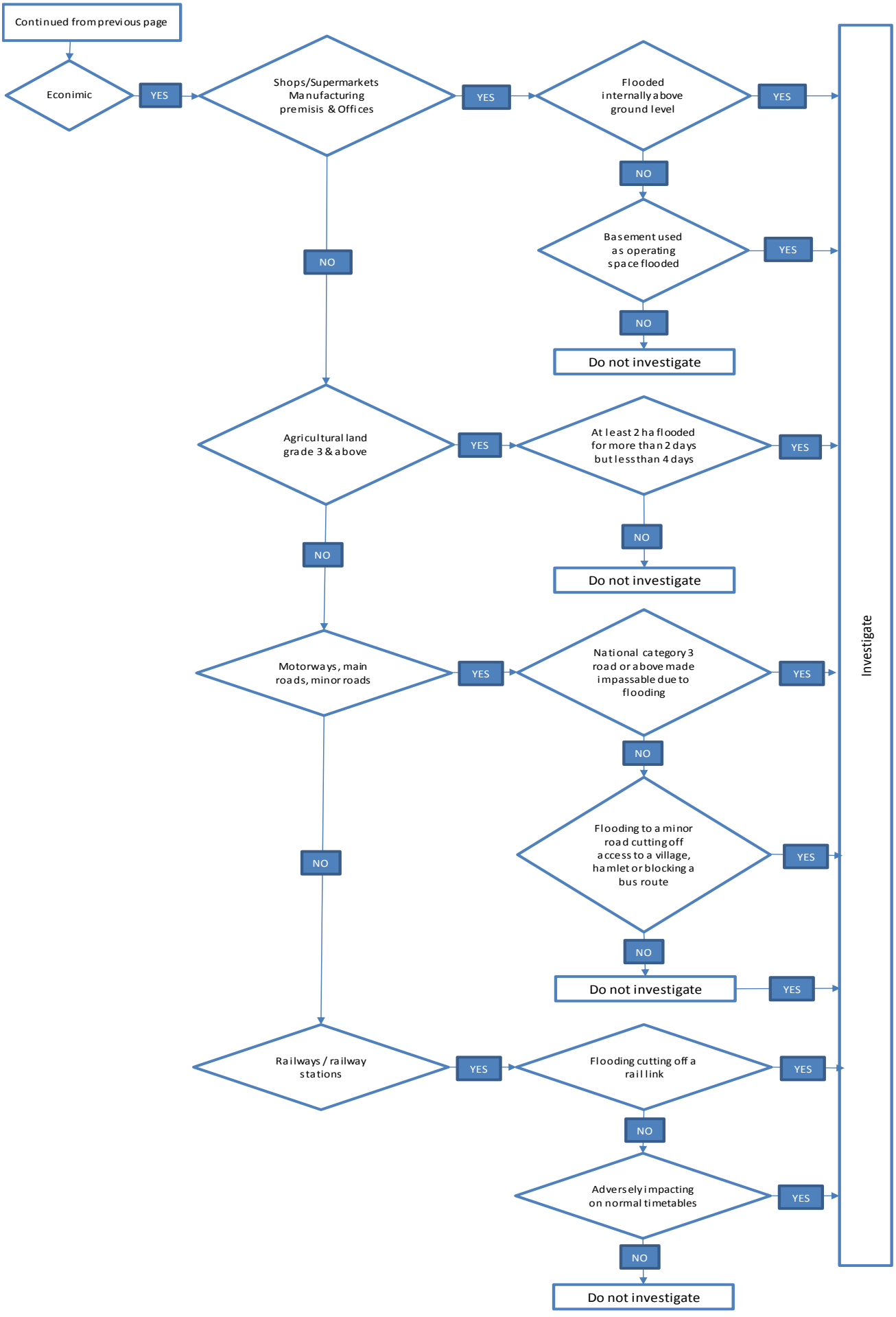


Appendix 2.2 Flow Chart to Assist in Determining if an Investigation is Necessary or Appropriate

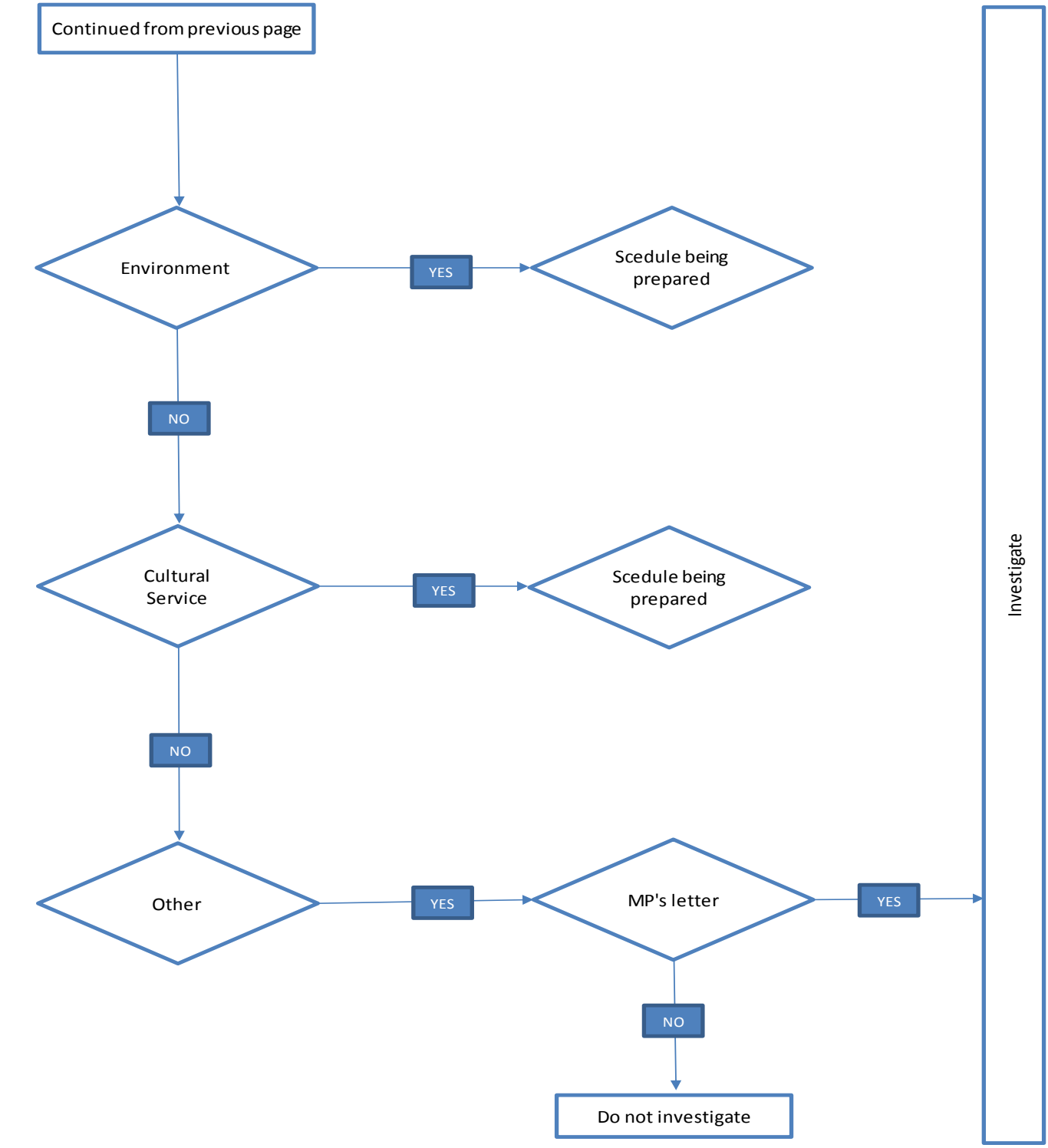
Refer to Appendix 2.3 for more detail on severity and options



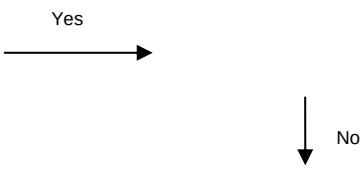
APPENDIX (d)


Continued from previous page
Econimic
YES
Shops/Supermarkets Manufacturing premisis & Offices
YES
Flooded internally above ground level
YES
NO
Basement used as operating space flooded
YES
NO
Do not investigate
NO
Agricultural land grade 3 & above
YES
At least 2 ha flooded for more than 2 days but less than 4 days
YES
NO
Do not investigate
NO
Motorways, main roads, minor roads
YES
National category 3 road or above made impassable due to flooding
YES
NO
Flooding to a minor road cutting off access to a village, hamlet or blocking a bus route
YES
NO
Do not investigate
YES
NO
Railways / railway stations
YES
Flooding cutting off a rail link
YES
NO
Adversely impacting on normal timetables
YES
NO
Do not investigate
Investigate

APPENDIX (d)


Continued from previous page
Environment
YES
Scedule being prepared
NO
Cultural Service
YES
Scedule being prepared
NO
Other
YES
MP's letter
YES
NO
Do not investigate
Investigate

APPENDIX (d)



Appendix 2.3 Severity of Flooding and Options for Investigating Under Section 19

2.3.1. Investigating Flooding Causing Loss of Human Life

Impact	Flood Level	Severity	Benefits	Consequences
Loss of Human Life.	All floods	Very High	All flooding causing loss of human life would be recorded and investigated,	None

2.3.2. Social Risk (Residential) Property Flooding

Property type	Flood Level	Severity	Benefits	Consequences
All residential property type including gardens, basements.	Up to within 300mm of finished floor level or above	Low Severity ------>	All flooding would be recorded and investigated, Flooding preventing access to property identified.	Not necessarily impacting on community as a whole System overload as everything is included such as: Minor flooding, puddles or waterlogging to gardens Basements used for storage below water table not properly sealed Not generally possible to identify flooding below floor level. Not generally necessary or appropriate
One or more residential properties including basements used as living accommodation excluding but gardens and access.	flooded internally above ground floor level and/or below ground level where used as basement living accommodation		All property likely to be damaged by flooding investigated.	Not necessarily impacting on community as a whole. Flooding causing access/egress to be interrupted not recorded. Basement flooding not easily identified
One or more residential properties including basements used as living accommodation excluding but gardens and access with	flooded internally above ground floor level and/or below ground level where used as basement living accommodation	<------ High Severity	Only property with a recent flood history and likely to be damaged by flooding investigated. Flood prevention measures potentially justified	Not necessarily impacting on community as a whole. Flooding causing access/egress to be interrupted not recorded. Basement flooding not easily identified A property situated close to a watercourse, such as

recent flood history.				a mill building, would expect to flood regularly and possibly not considered “necessary or appropriate” to investigate
At least 5 residential properties flooded	flooded internally above ground floor level		Significant flooding affecting a community as a whole investigated. Flood prevention measures likely to be justified	Small community flooding might be excluded

2.3.3. Critical Services Property Flooding

Property type	Flood Level	Severity	Benefits	Consequences
All critical services property as identified in Appendix D of the Lincolnshire PRFA	One or more properties flooded internally above ground floor level and/or below ground level where used as basement living accommodation or for the provision of critical services; and/or One or more properties rendered inoperable, due to the access to the premises being impassable. One or more flooded critical installations, resulting in a loss of service impacting on the local community or causing pollution to internal premises.	Low Severity ------>	Flooding of all properties defined as critical services in the Lincolnshire PRFA investigated. Properties benefitting small communities included	
Only properties having a major impact on the wider community included (ie hospitals, health centres, clinics, surgeries; care/nursing homes; police, fire, ambulance stations; and/or power/water	One or more properties flooded internally above ground floor level and/or below ground level where used as basement living accommodation or for the provision of critical services; and/or One or more properties rendered inoperable, due to the access to the premises being	<------ High Severity	Flooding to properties critical in all circumstances or significantly impacting on the whole community is investigated	Properties benefitting small communities not included Sites designated as rest/feeding centres potentially not available in major flood events

services sites	impassable. One or more flooded critical installations, resulting in a loss of service impacting on the local community or causing pollution to internal premises.			

2.3.4. Economic Category Flooding

2.3.4.1 Flooding to Business Properties

Property type	Flood Level	Severity	Benefits	Consequences
Shops/ supermarkets Manufacturing premises Offices	One or more properties flooded internally above ground floor level and/or below ground level where used as basement operating space. One or more properties rendered inoperable, due to the access to the premises being impassable.	Low Severity ------>	Properties benefitting small communities included	
Shops/ supermarkets Manufacturing premises Offices with an operating floor area in excess of 4000sq m or employs over 50 employees	One or more properties flooded internally above ground floor level and/or below ground level where used as basement operating space. One or more properties rendered inoperable, due to the access to the premises being impassable.		Only business premises impacting on wider community included	Properties benefitting small communities excluded
Two or more Shops/ supermarkets Manufacturing premises Offices in excess of 4000sq m or 50 employees	Two or more properties flooded internally above ground floor level and/or below ground level where used as basement operating space. Two or more properties rendered inoperable, due to the access to the premises being	<------ High Severity	Only business premises impacting on larger communities (towns+) included	Properties benefitting small and medium sized communities excluded

	impassable.			

2.3.4.2. Flooding to Agricultural Land (for definitions see Appendix 2.4)

Property type	Flood Level	Frequency	Severity	Benefits	Consequences
Agricultural land grade 3 & above	Summer or winter flooding for up to 4 days or waterlogged for in excess of 4 days	occasionally	Low Severity ---->	Most productive land included	Risk of excessive investigations required No area defined for de-minimus
Agricultural land grade 3 & above	Summer flooding for up to 4 days	occasionally		Most productive land included Covers land affected during most productive period	Risk of excessive investigations required No area defined for de-minimus
Agricultural land grade 3 & above	At least 2ha flooded for up to 4 days	occasionally			Excludes small areas of land which could be profitable.
Agricultural land grade 3 & above	At least 2ha flooded for more than 2 but less than 4 days	rare	<---- High Severity	Pragmatic approach to wide variation of options	Could exclude productive land flooded for medium duration and therefore crop damage
Agricultural land grade 2 & above	At least 2ha flooded for more than 4 days.	rare			Excludes productive grade 3 land

Note: To be reviewed as part of ongoing work on flood risk assessment, which incorporates agricultural land.

2.3.4.3. Flooding to Motorways, main roads, minor roads Bus services/depots (for definitions, see Appendix 2.5)

Property type	Flood Level	Severity	Benefits	Consequences
Any section of a classified road	Made impassable due to flooding; and/or flooding to a minor road cutting off effective access to a village, hamlet or blocking a designated bus route	Low Severity ------>	Covers accessibility of small communities at all times	Risk of excessive investigations required Minor roads flooded for short duration having little impact on any community
Any section of a national category 3 road or above	Made impassable due to flooding; and/or flooding to a minor road cutting off effective access to a village, hamlet or blocking a designated bus route for more than 8 hours.		Only includes significant disruption to access to communities	Access to individual isolated properties excluded
Any section of a national category 2 road or above	Made impassable due to flooding cutting off effective access to a community for more than 12 hours.	<------ High Severity	Restricts investigations to serious flood incidents	Access to villages and hamlets excluded, likely significant impact on large numbers of communities

2.3.4.4 Flooding of Railway/Railway Stations

Property type	Flood Level	Benefits	Consequences
Any section of a commercial railway/railway station	Flooding adversely impacting on normal timetables or cutting off a rail link	Identifies any disruption to a community	Excludes private railways and model railways

2.3.5 Flooding to Environmental Sites

Property type	Flood Level	Severity	Benefits	Consequences
Special protection Areas (SPAs) Special Areas of Conservation (SACs) RAMSAR Sites BAP Habitats Special Sites of Scientific Interest (SSSIs) Number of designated Local Nature Sites	The consequences of flooding could be positive or negative and a schedule of consequences of flooding to individual sites is being prepared.	**To be determined**	**When the schedule has been prepared, only adverse flooding will be investigated**	To be identified

2.3.6. Flooding to Cultural Heritage Sites

Property type	Flood Level	Severity	Benefits	Consequences
Number of World Heritage Sites Number of Listed Buildings Scheduled monuments Registered parks & gardens	A schedule of consequences of flooding to individual sites is being prepared.	To be determined	When the schedule has been prepared, only adverse flooding will be investigated	To be identified

Appendix 2.4 Description of the Grades and Subgrades of Agricultural Land (Defra Guidance October 1988)

The most productive and flexible land falls into Grades 1 and 2 and Subgrade 3a and collectively comprises about one-third of the agricultural land in England and Wales. About half the land is of moderate quality in Subgrade 3b or poor quality in Grade 4. Although less significant on a national scale such land can be locally valuable to agriculture and the rural economy where poorer farmland predominates. The remainder is very poor quality land in Grade 5, which mostly occurs in the uplands.

Grade 1 - excellent quality agricultural land
Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality.

Grade 2 - very good quality agricultural land
Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of the more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1.

Grade 3 - good to moderate quality agricultural land
Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

Subgrade 3a - good quality agricultural land
Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.

Subgrade 3b - moderate quality agricultural land
Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.

Grade 4 - poor quality agricultural land
Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.

Grade 5 - very poor quality agricultural land
Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops.

Table 1 Grade according to flood risk in summer

Grade/ Subgrade		Flood limits frequency	duration
1		very rare	short
2		rare	short
3a		very rare	medium or long
	or	rare	medium
	or	occasional	short
3b		rare	long
	or	occasional	medium
4		occasional	long
	or	frequent	short or medium
5		frequent	long

Table 2 Grade according to flood risk in winter

Grade/ Subgrade		Flood limits frequency	duration
1		rare	short
2		rare	medium
	or	occasional	short
3a		rare	long
	or	occasional	medium
	or	frequent	short
3b		occasional	long
	or	frequent	medium
4		frequent	long

The terms used in Tables 2 and 3 are defined as follows:

Season summer - mid March to mid November
winter - mid November to mid March

Duration short - not more than 2 days (48 hours)
medium - more than 2 but not more than 4 days
long - more than 4 days

Frequency very rare - not more than once in 15 years
rare - once in 10 to once in 14 years
occasional - once in 3 to once in 9 years
frequent - more than once in 3 years

Appendix 2.5 National Standard Road Categories

Category 2 - Strategic Route
Trunk and some Principal "A" roads between Primary Destinations.

Routes for fast moving long distance traffic with little frontage access or pedestrian traffic. Speed limits are usually in excess of 40 mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.

Category 3a - Main Distributor
Major Urban Network and Inter-Primary Links. Short-medium distance traffic.

Routes between Strategic routes and linking urban centres to the strategic network with limited frontage access. In Urban areas speed limits are usually 40 mph or less, parking is restricted at peak times and there are positive measures for pedestrian
safety.

Category 3b - Secondary Distributor
Classified Road (B and C class) and unclassified urban bus routes carrying local traffic with frontage access and frequent junctions.

In rural areas these roads link the larger villages and HGV generators to the Strategic and Main DistributorNetwork. In built areas these roads have 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On-street parking is generally unrestricted except for safety reasons.

Category 4a - Link Roads
Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions.

In rural areas these roads link the smaller villages to the distributor roads. They are of varying width and not always capable of carrying two way traffic. In urban areas they are residential or industrial interconnecting roads with 30 mph speed limits random pedestrian movements and uncontrolled parking.

Category 4b – Local Access Road
Roads serving limited numbers of properties carrying only access traffic.

In rural areas these roads serve small settlements and provide access to individual properties and land. They are often only single lane width and unsuitable for HGVs. In urban areas they are often residential loop roads or cul-de-sacs.

Appendix 3 Generic Investigation Template for Fluvial and Surface Water Flooding (Coastal Template to follow)

Lincolnshire County Council Flood Investigation Report for:

Site Name & Location……

Date Flooding Occurred……

Date report of flooding received ...../...../.....
Name & job title of person assessing if an investigation is necessary/appropriate .....
Date assessed as necessary/appropriate for investigation ...../...../.....
Date referred to relevant RMA ...../...../.....
Name and job title of person completing investigation .....
Date report completed ...../...../.....
Date of Local F&DG Management Group Meeting when relevant RMA notified ...../...../.....
Date Investigation Report was included on Section 19 Spreadsheet on to the LCC Webpage (FW&MD Team) ...../...../.....

Executive Summary

1. Introduction

1.1. LLFA Investigation

Explain reason for investigating.

1.2. Site Location

Describe the site with map.

1.3. Drainage System

Describe the local drainage system.

2. Flooding History

2.1. Previous Flood Incidents

Identify any known floods affecting the site or area.

2.2. Flood Incident ..... 201?

Describe the flood being investigated; including any damage caused (include photo's wherever possible).

2.3. Rainfall Analysis

Identify the rainfall event during the incident (usually available from the Environment Agency).

3. Possible Causes

3.1. Culvert Conditions

Details and condition any relevant culvert at the time of the incident (include photo's wherever possible).

3.2. Open Watercourse Conditions

Details and condition any relevant watercourse at the time of the incident (include photo's wherever possible).

3.3. Access Structures

Details and condition any relevant access structure(s) at the time of the incident (include photo's wherever possible).

3.4. System at Capacity

Identify possible options for remedial action (include photo's wherever possible).

4. Rights and Responsibilities

4.1. Lead Local Flood Authority

Explain specific role and responsibility for this particular incident.

4.2. Environment Agency

Explain specific role and responsibility for this particular incident.

4.3. .....District Council

Explain specific role and responsibility for this particular incident.

4.4. Internal Drainage Board

Explain specific role and responsibility, if any, for this particular incident.

4.5 Highways Authority

Explain specific role and responsibility, if any, for this particular incident.

4.6. Water Company

Explain specific rights and responsibility for this particular incident.

4.7. Riparian Landowners

Explain specific rights and responsibility for this particular incident.

4.8. Residents

Explain specific rights and responsibility for this particular incident.

5. Permissive Powers of RMAs

Explain what specific permissive powers the LLFA, EA, relevant Local authioritya or IDB could use in promoting a solution to this particular problem.

6. ..... Flood Alleviation Scheme

Explain any flood alleviation scheme proposed, ongoing or recently completed which could impact on this incident (include photo's wherever possible).Include any works on site (e.g. temporary works)

7. Conclusion

8. Recommendations

Abbreviations/Acronyms

Clarify any Abbreviations/Acronyms used in the report.

Useful Links and Contacts

Identify relevant links and contacts.

Appendix 4 Summary of Discharge of Statutory Responsibilities Template

Name of Investigation ……..

CSC Transaction Ref No. .....

Date Investigation Completed . ...../...../.....

Section 19 Paragraph 1 (a) which risk management authorities have relevant flood risk management functions:

Risk Management Authorities involved:

.....

.....

.....

.....

Section 19 Paragraph 1 (b) whether each of those risk management authorities has exercised, or is proposing to exercise, those functions in response to the flood

Name of Risk management Authority - functions exercised? Yes/no

Name of Risk management Authority - functions exercised? Yes/no

Name of Risk management Authority - functions exercised? Yes/no

Name of Risk management Authority - functions exercised? Yes/no

Section 19 Paragraph (2) Where an authority carries out an investigation under subsection (1) it must—

(a) publish the results of its investigation, and
(b) notify any relevant risk management authorities

(a) Date results of investigation published on Spreadsheet ...../...../.....

(b) Date of F&DG Management Group Meeting when relevant RMA notified of results of investigation

...../...../.....