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Road Closure Map
page 10

Forewords

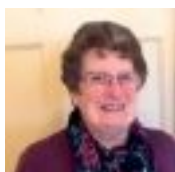
SOUTHWELL FLOOD FORUM



Emergencies happen! At times there may be an emergency but your life is not in danger, so it is crucially important for everyone to be prepared for any local situation which might occur.

Everyone needs to have the confidence to be able to deal with these events and also to take responsibility for their own property and personal safety as well being good neighbours to others who may need help.

Whilst Southwell Town Council has no statutory authority and no funding to deal with emergencies, it is the body which represents, supports and listens to the whole community. As such, it has given considerable backing and assistance to Southwell Flood Forum since its formation. The Town Council has worked together with the Forum on this Community Resilience Handbook, which includes a list of emergency contact numbers.



Beryl Prentice
*Southwell Town Council
Chairman 2015-16*

“Some good things have undoubtedly come out of the floods, particularly in Southwell, which I hope gives a glimmer of hope to other communities. That community was brought together wonderfully by those events. A very important and award-winning flood forum was founded.”

Robert Jenrick MP for Newark

I was delighted to be invited to join the Southwell Flood Forum as Chair in September 2015. This dynamic and influential community action group was formed following the major flood in July 2013. It's a challenge I welcome, especially to continue the hard work of Co-Chairs Rob Jordan and Mark Bertolini with the dedicated core team and highly motivated volunteers who have put in thousands of hours.

We have collated survey information; harnessed the valuable local technical expertise to support the flood consultants; campaigned and lobbied Government, Local Authorities and national agencies and were instrumental in obtaining the Repair and Renew Grant. Volunteers worked hard to clear watercourses after the 2013 flood which was much appreciated by riparian owners and resulted in much improved flow.

We are determined to achieve the outcome that Southwell needs and deserves – a mitigation scheme that makes us less vulnerable to flooding.

The safety of Southwell depends on community and personal resilience. We must 'be ready to act, respond and recover' when an emergency happens.

Southwell is a vibrant community with wide-ranging skills and people who are interested in maintaining our beautiful environment and historic town. Furthermore, alongside the Forum is a committed and supportive Town Council.

We have produced this Handbook for you to keep for future reference. We hope you find it a useful resource, which leads you to a range of websites (highlighted in blue) with further information. Some weblinks have been shortened (with a 'goo' preface) for your convenience.

Please help us to support a Resilient Southwell – we, our families and visitors will all benefit.



Tim Farr
*Southwell Flood Forum
Co-Chair*

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Jargon Buster

Resilience is not just about flooding - however flooding is one emergency for which we can take steps to alleviate. Here's a guide to flood-related terminology.

Balancing pond

A pond designed to attenuate flows by storing runoff during heavy rainfall and releasing it at a controlled rate during and after the rainstorm to slow the passage of water downstream.

Bow wave

Wave caused by a vehicle driving through water.

Bund (for flood alleviation)

A raised bank built along contour lines mostly on agricultural land to collect and slow down surface water runoff, increase water infiltration and prevent soil erosion.

Catchment

Basin-shaped area from which surface and subsurface water flows into watercourses and collects in the lowest area downstream.

Cost benefit

The overall value for money of a project or scheme.

Culvert

A channel or pipe that carries water below ground level.

Exceedance

The amount by which the capacity of a drainage system carrying storm water (including the result of a blockage to an inlet) has been exceeded.

Fluvial flooding

Flooding from a river or watercourse

Flood Risk Assessment (FRA)

Required for development in a Flood Zone. May include flood modelling, testing of strategies and designs to mitigate flood risk and flood response plans.

goo.gl/OROX7q

Flood Zone

Zones 1 to 3 numbered on the basis of areas with a likelihood of flooding from rivers and the sea at any location and based on the presence and effect of all flood defences, predicted flood levels, and ground levels. goo.gl/VvoFCq

French drain

A trench filled with gravel or rock or containing a perforated pipe that redirects surface water and groundwater away from an area.

Grip

Shallow ditch connecting the road edge to a roadside ditch to drain rain water from the highway.

Gullies

Grating grids in tarmac/hard surface (horizontal) to drain roads/pavements.

Flood Mitigation

A scheme designed to manage and reduce flood risk.

Neighbourhood Plan

This plan describes how much and what sort of land development should happen and in broad terms where this should take place. It includes policies that define the development it will or will not support.

Offlets

Vertical drainage inlets in kerbs.

Surface water

Surface water collects on the surface of the ground. Localised flooding may occur when rainwater does not drain away through drainage systems or soak into the ground. Depends on the relationship between hard, impermeable and soft or permeable surfaces, the state of the watercourses and 'health' of the drainage system.

Swale

Shallow, broad and vegetated channels designed to store and/or convey runoff and remove pollutants.

How we arrived at Resilience from Flooding

The 'Supporting a Resilient Southwell' campaign aims to raise awareness of how we personally and as a town can improve our ability to withstand and recover from adversity - be prepared, able to cope and reduce the impact of an emergency.

The Southwell Flood Forum, affiliated to the National Flood Forum, set out to harness the town's energy and capacity to provide local experience and knowledge to the Southwell Flood Mitigation Plan.

After attending the National Flood Forum Pathfinder conference in March 2014, we realised we were already developing community resilience through the work on the Community Resilience Emergency Plan (*page 9*).

Flooding is a risk our town has experienced and continues to face – one that the Southwell Mitigation Plan seeks to reduce (*page 16*). However, as well as some residual flood risk, we may still be vulnerable to other emergencies, such as power cuts, water pollution, heavy snow etc.

It has been a steep learning curve from flood to resilience. We are volunteers, with wide-ranging skills and experience and support from authorities and agencies.

We invite everyone to join in and continue in the same spirit that motivated the wider community particularly in the months after the 2013 flood.

Comments and questions to resilience@southwellfloodforum.org.uk.

There is more information on our website about articles in this Handbook.

www.southwellfloodforum.org.uk



Flood
23.7.13

Watercourse
clearance
27.7.13 - 25.5.14

SFF formed
9.8.13

Public meeting,
volunteers recruited
10.9.13

First Emergency
Planning Meeting
21.10.13

First Warden training
26.11.13

Community Resilience
Drop-in event
18.6.14

Refresher training
26.4.15

Road Closure Dry Run
17.5.15

Communications Hub
Dry Run
31.1.16

Community
Resilience Day
15.5.16

Community Resilience

is a way of future-proofing Southwell for incidents that have the potential to disrupt day-to-day life

The Community Resilience and Emergency Plan is based on an integrated professional model which assesses the outcome of an incident in order to subsequently update and improve the Plan.

Knowing what to do and when, is key to personal and community resilience. Knowing how to act calmly and follow a plan will mean you can recover more quickly from an incident.

There are common elements in dealing with varying types of incidents such as flood, heatwave, ice or snow, but it will be different, for example, preparing for and recovering from a period of heatwave – compared with preparing and recovering from the long-term trauma of a flood.

What is Community Resilience?

The Cabinet Office defines community resilience as:

“Communities and individuals harnessing resources and expertise to help themselves prepare for, respond to and recover from emergencies, in a way that complements the work of the emergency responders.”

While there is no universally accepted definition, we believe that, at local level, it means that the more we know and understand what affects us, the better we can cope during an incident and the better we can recover from an incident. Some define it as being both ‘strong and flexible’

Community Resilience can be divided into two main categories:

Social Capacity

How we can help each other, understand others’ needs, and be a ‘good neighbour’.

Resources

Identify your own and others’ useful skills and equipment.

Power Cut

Swap telephone numbers with neighbours
Look out for those who look out for you.
Who might be vulnerable, temporarily incapacitated or dependent on a powered aid e.g. stairlift, panic button?
Who might need extra help?

Power Cut

Grab bag (*see page 7*)
Charge mobile phones daily
Cordless phones will not work in a power cut - keep a non-cordless phone handy
Protect electrical equipment with a surge protector
Back up computer regularly
Who has a generator?
Who has alternative methods of cooking?
e.g. a camping stove, gas appliance

Flooding

Do neighbours have Property Level Protection (PLP)?
Do they need help to put PLP in place? (*see page 7*)
Can you help protect their property if neighbours are out? e.g. move items upstairs, put PLP in place
Are we ourselves vulnerable and need people to check on us?
Have our family/neighbours got a spare key, our telephone numbers?
Help neighbours pack grab bags
Keep your personal Emergency Plan up to date

Flooding

Grab bag (*see page 7*)
Use FloodLine, Met Office, Communications Hub etc
Obtain flood resilience products and/or make your home more resilient
Keep ‘stop gap’ products such as Aqua Sax, Absorbeez for residual leaks.

What Community Resilience means for me.

Knowing your neighbours creates a sociable, safe and supportive street

How will people in your street work together before, during and after an incident?

Who's a First aider? Who has alternative cooking facilities, a spare room?

Consider those who may need help.

Thinking ahead saves time

Work through 'in case of' scenarios - emergency childcare, fetching children from school, pet care, plan your route according to the NCC online gritting map, where to move your car to safety in the event of a flood.

Consider what you may need to do and in what order, depending on the type of emergency - heatwave, snow and ice, power cut, flooding, fire.

Bear in mind that hyperthermia and hypothermia can affect older people and young children very quickly.

If you have a particular medical condition, ensure your grab bag contains necessary medication. If you are medically dependent on electricity (e.g. on dialysis) or are vulnerable, ensure you register onto Western Power's Priority Service Register.

Planning ahead saves a panic

Make a household emergency plan including any contingency arrangements if you rely on services or aid e.g. homecare, childcare, stairlift, panic button. See suggested plans:

- NCC - goo.gl/46m0mc
- Fire Service - www.notts-fire.gov.uk
- Police - www.nottinghamshire.police.uk/advice/planning
- Local Resilience Forum - goo.gl/RHs7Bv
- Western Power - goo.gl/htR6qb

Prepare a list of useful important phone numbers e.g. emergency services, insurance company, office, radio station frequency, family and neighbours, surgery, your local Road Closure Lead Warden if appropriate (see page 11).

Know how to turn off your gas, electricity and water. Mark taps or switches with stickers. Keep a non-cordless phone handy in case of a power cut.

Sign up for flood alerts, weather warnings; download the British Red Cross Emergency App

If you are in a flood risk area, make sure your insurance covers flooding. See Flood Re www.floodre.co.uk

Notebook and pen/pencil

Warm waterproof clothing

Radio - wind-up/battery, spare batteries

Torch - wind-up/battery, spare batteries, whistle

Keys, cash/credit cards, copies of insurance documents and emergency plan in a waterproof wallet

First aid, medication, sanitary and toiletry items

Mobile phone charger

Water, non-perishable snacks

Grab bag – what you need in case you have to be away from home for a few days. Check and update contents annually – e.g. when your insurance is renewed. Keep in a safe place.

Don't overload it – you need to be able to carry it.

House protection - If you are in a flood risk area, consider flood resilient products or making your home more flood resilient – see www.bluepages.org.uk.

Sandbags should only be considered as a last resort. They are bulky to store, heavy to handle and once contaminated have to be disposed of correctly. NSDC only distribute them in certain circumstances according to strict criteria – www.newark-sherwooddc.gov.uk/sandbags. The EA advise "...sandbags are relatively ineffective when compared with purpose-designed flood protection products".

There are other products such as Aqua Sax, Flood Sax, Absorbeez which are easy to store and handle, although they too have to be disposed of correctly after an event.



How understanding weather helps us



Being able to understand the weather and how to react is useful to help guide our actions before and during severe weather conditions.

How would you cope during a severe snow storm? a flash flood? or a period of hot weather?

Climate change is posing risks of more 'unprecedented' weather.

Where to find more information about the Weather?

The Met Office provides detailed information regarding the weather, our climate and how to interpret it.

The Southwell Flood Forum home page displays the current Met Office forecast for Southwell and any specific warnings.

You can subscribe to the Met Office email alert system for the East Midlands which automatically notifies you when a weather warning is issued. Visit www.metoffice.gov.uk and click email alerts at the top of the page.

Want to quickly catch up with the latest weather? The Met office #WeatherStory has regular updates as the 'story' unfolds. www.metoffice.gov.uk/get-ready-for-winter/WeatherStory

There are apps for smartphones including RainAlarmXT which displays an easy-to-interpret satellite image of rainfall data for your chosen location.

Flood warnings

As a town vulnerable to flooding, residents in Flood Risk Zones can sign up to receive Flood Warnings via FloodLine flood-warning-information.service.gov.uk. This service, operated by the Environment Agency, provides alerts and advice on what to do.

FloodLine uses a combination of meteorological data (both predications from the National Flood Forecasting Centre* and observations from local officers), the chief forecaster's summary and data collected from monitoring stations, such as ground water monitors, which measure the saturation levels in the ground.

It is focused on main rivers, but does cover tributaries such as the River Greet and Potwell Dyke.

*National Flood Forecasting Centre is a partnership between Met Office and EA, to provide more accurate, targeted information to the Category 1 and 2 responders (see page 14). www.fcc-environment-agency.metoffice.gov.uk

Keep an eye on the weather situation before and during a period of heavy rain

Because our flooding is caused by a range of factors affecting different parts of town in differing ways, Floodline is just one indication of a possible event. We suggest you use a combination of the following indicators and resources to understand your risk:

- + Met Office information
- + FloodLine information 0845 988 1188
- + Radar Images from RainAlarmXT
- + Existing state of the ground – saturated or bone-dry – can indicate the likely rate of surface water runoff
- + State of the watercourses, drains, trash screens etc.

"Knowing what is 'up wind' is vital in a severe weather situation. Join other weather watchers on WoW (Met Office Weather observations website – see link below) to see the latest local weather heading your way and to tell others what is happening in Southwell: wow.metoffice.gov.uk"

Hazel Reeve, Civil Contingencies Advisor, Met Office

Community Resilience and Emergency Plan

Representatives of Southwell Flood Forum and Southwell Town Council formed the Emergency Planning group to prepare and maintain a Community Resilience and Emergency Plan. This will help us anticipate, assess, prevent, prepare, respond to and recover from emergencies. The scope of this plan will expand to cover emergencies other than flooding, such as snow/ice, power failure and other incidents.

Emergency Communications Hub

This Hub based at the Old Courthouse, on the Burgage will be opened when an emergency occurs, staffed by designated Town Councillors and members of the Forum.



During and after an incident, this Hub will collate information from Wardens, residents and emergency services and report up-to-date 'on the ground' information quickly and accurately to District and County emergency planners and first responders.

Thus we can maintain contact with Wardens and their huddles to ensure the Road Closure Scheme is operational and provide support and information until the emergency services arrive and respond appropriately. To contact the Hub, call either of the mobiles – 07467 208582, 07467 208584 or 01636 816103. There will be a slight delay between the start of an incident and the Hub being operational.

Flood and Road Closure Wardens

Flood and Road Closure wardens provide vital support, working within the Community Resilience and Emergency Plan to ensure it is effective.

Trained Road Closure Wardens have a strict remit, with delegated legal authority to close roads. They will monitor trigger points at specific locations during heavy rainfall to assess if a road closure is needed (see page 12).

Flood Wardens are trained in water safety etc, and their role will develop as the Plan expands to encompass other incidents.

All Wardens will know their neighbours, their local environment and have the skill to respond quickly and appropriately. Depending on the nature of the emergency, Wardens may have differing roles - some may look after a group of vulnerable people, some may provide tea and coffee or offer shelter.

Why should I volunteer?

We have been delighted that so many volunteers (60 as at April 2016) have been willing to train, enabling the Southwell Community Resilience and Emergency plan to become a reality.

But we can't rest on our laurels! People's availability changes, people move or become incapacitated, so we need to maintain a large trained team to ensure we are fully prepared when an incident occurs.

As a volunteer, you can be involved as much or little as you are able. At its most basic it requires about two hours a year to train and keep up-to-date. Thereafter it's being willing to take up your role if an emergency occurs and you're available.

It doesn't matter if you work during day, or have commitments in the evening. The more trained volunteer wardens there are, the more likely that among the 'pool' there will be enough people to respond when necessary – which makes Southwell a safer place for everyone. Contact Southwell Flood Forum if you are interested.

“Most of Southwell witnessed the effects of the July 2013 Flooding. While we can't prevent a recurrence of that terrible weather, there are numerous steps we can take as a community to mitigate its impact. That's why I've taken an interest, got involved, and am “doing my bit”. I believe that supporting the Flood Forum is absolutely vital”.

*Colin Boulter, Lead Road Closure Warden
Newark Road (NEW) huddle*

Road closure map



These Road Closures do not necessarily indicate areas at risk of flooding. Check Flood Risk Zones on the EA website.



Key

-  Road Closure Point
-  Closed Road

Huddles

(Road Closure points grouped together)

CHET

Church Street, Easthorpe
Points: 19, 20

HALM

Halam Road
Points: 8, 9

KIRK

Kirklington Road
Points: 10-12

LKR

Lower Kirklington Road
Points: 13, 14

NEW

Newark Road
Points: 17, 18

NOTT

Nottingham Road
Points: 1-5

STN

Station Road
Points: 15, 16a/b

WEST

Westgate
Points: 6, 7

For contact details of the Lead Wardens in these huddles see:

www.southwellfloodforum.org.uk/community/emergency/road-closure/

What does the Community Road Closure Scheme mean for me?

Some houses which may not be considered at risk of flooding can nevertheless become susceptible due to traffic driving through floodwater causing it to surge across pavements and into properties.

The road closure scheme is designed to minimise damage to properties from bow waves and to save lives by preventing people from entering the floodwater.

It is important to remember that floodwater

- should not be entered under any circumstances
- can be fast-flowing, dirty, dangerous and deadly
- can hide danger points such as open ditches and manholes

In partnership with Nottinghamshire County Council, a Community Road Closure Scheme has been designed. Trained volunteers, with delegated legal power from NCC, are able to close stretches of roads which are prone to flooding. The road closure signage is stored safely near to the closure points and if an incident threatens, wardens can move it into a 'standby' position near the road closure point.(see centrefold map) and monitor the trigger point.

Trigger points are where the floodwater reaches a particular place/height in strategic locations, which might indicate properties are at imminent risk of flooding. Only when pre-determined specific triggers are met, can the wardens safely close the road. Drivers and pedestrians need to respect the reasons for the closures and co-operate with wardens in their voluntary role.

When roads are closed, drivers need to be aware that there will be temporary disruption to their journey. During an incident it may not be possible to find an alternative route into town or to get home, so it would be advisable to phone a neighbour to let them know of your situation.

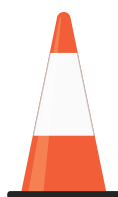
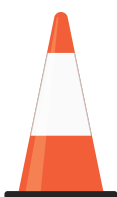
Even after the floodwater has receded, the roads may still be dangerous due to debris deposited by the floodwater. The roads can only be opened after NCC Highways Dept has inspected and cleaned as necessary, ensuring the highway is safe.

What training do I need to be a warden?

In order to be a road closure warden you need to be trained initially and attend annual refresher training to maintain and update your skills (*see page 9*).

You will receive practical and theoretical training from:

- Nottinghamshire County Council, Highways - how to place signage safely on the road side.
- Nottinghamshire County Council, Health and Safety - manual handling.
- Nottingham Fire and Rescue Service - how to work safely near water
- Nottinghamshire County Council, Emergency Planning - the emergency road closure scheme.



How we can all look after Southwell

Being proud of our town

Keeping Southwell clean and well-maintained benefits us all – see also “Watercourses” (page 18).

- creates a nicer place to live
- is a welcoming and pleasant venue for tourists and visitors
- reduces flood risk.

Drains are not waste bins!

Sweeping UP debris, grit, litter, general waste and debris from the gutter and pavement outside your property rather than sweeping it DOWN the drains or allowing the rain to wash it into the gullies can help keep our drainage system working effectively.

If you have a gravel driveway, consider a border of honeycomb gravel stabiliser to minimise spread of grit into the roadway.

“Residents can play their part in keeping drains and gullies clear by picking up small amounts of litter, pulling up weeds and sweeping up mud and grit around their property. If you spot any bigger problems let the Council know so that it can be dealt with as soon as possible.”
Matt Adey, Newark and Sherwood District Council

The health of our sewers

Severn Trent Water state that 75% of the sewer blockages across their

region are caused by the wrong things being flushed down the toilet or put down the sink.

Top tips for avoiding blocked drains:

- collect used cooking fats, oils and grease in a container and put it in the bin
- only ever flush the 3 ‘P’s – pee, poo and toilet paper
- Never flush wipes – all kinds of wipes (including the flushable ones) cause big problems. Put them in the bin instead.

For more advice about keeping the drains flowing – stwater.co.uk/sewer

Shaun Maskrey, University of Nottingham Modelling Flood Risk

At the mere mention of ‘modelling’ most people question whether they can contribute. Modelling is seen as complex, mathematical and requiring specialist technical expertise.

Southwell Flood Forum and local residents took up the challenge and have been working with the University of Nottingham to model local flood risk knowledge from across the town.

Most people affected by flooding in Southwell are not modellers, but are without question those with the greatest knowledge of flood consequences. Due to the complexities of traditional modelling, local knowledge and the role of the community are rarely captured.

This project needed to be a little different. It focussed on practical small-scale interventions that could be implemented by individuals and the community, utilising their local knowledge to mitigate risk, reduce damage and speed up recovery.

The project started by identifying eight ‘risk hotspots’ in Southwell, before questioning what was at risk, and how these risks changed with flood water depth. The participants then considered measures that could reduce those risks. The model showed where community intervention (e.g. road closures, watercourse clearance) could be focussed to effect the greatest reduction in risk. It brought together people (and therefore pockets of knowledge from across the town) to discuss flood risk and share their experiences. This model helps the community reach a consensus on which interventions to prioritise to reduce flood risk across the town.



Emergency Services

“Major emergencies are dealt with by the emergency services, local authorities, health and environment agencies, utilities and voluntary agencies in a combined response. In extreme conditions, such as large scale flooding, there is a possibility that these agencies may not be able to reach the scene immediately. In such circumstances, the initial response may rely largely on local people and communities.”

Nottinghamshire Police.

Emergency Services provide advice on preparedness as well as help during an emergency.

Our responsibility is to build Community Resilience and follow Community and Personal Emergency Plans.

The Civil Contingencies Act divides local responders into two categories with clear sets of duties, roles and responsibilities for emergency preparation and response at local level.

Category 1 - at the core of the response to most emergencies (the emergency services, local authorities, NHS bodies).

Category 2 - ‘co-operating bodies’ (the Health and Safety Executive, transport and utility companies).

Local Resilience Forum

Led by Nottinghamshire Police, the LRF consists of senior managers from the principal emergency planning and response organisations. They co-ordinate the overall direction and policies of emergency planning and preparation in Nottingham and Nottinghamshire and form the basis of the strategic multi-agency group that leads the overall response to any major emergency.



Nottinghamshire Fire and Rescue Service



- put out fires and work on fire prevention
- come to our rescue in other emergencies
- help minimise the impact of fire on the economy.
- organise home fire safety visits for older and vulnerable people
- support regulatory compliance in the business community

Nottinghamshire Police



- Respond to civil emergencies as set out in the National Resilience Planning Assumptions
- reduce crime and anti-social behaviour
- Protect, support and respond to victims, witnesses and vulnerable people
- Work on prevention, early intervention and reduction in reoffending

East Midlands Ambulance Service



- Provides emergency (999) and urgent care and transport to patients
- Provides telephone advice services (for non-life threatening illnesses or injuries)
- Responds to major incidents and emergencies with support from its Hazardous Area Response Team and air ambulance colleagues e.g. Lincolnshire & Nottinghamshire Air Ambulance
- Provides medical cover at major sporting, music and social events

Southwell Community First Responders (CFRs)

Local volunteers are dispatched to appropriate emergency calls by EMAS at the same time as an ambulance vehicle. Because CFRs live locally, they can be first on the scene providing essential treatment while ambulance crews travel to the emergency. CFRs carry out medical checks on the patient, treat their injuries, give oxygen or operate a defibrillator (if necessary) and continue to monitor the patient until the paramedic arrives.

There are also Publicly Accessible Defibrillators outside Southwell Library and the Minster School. In cases involving heart attacks, the EMAS control operator will tell the caller how to provide immediate treatment to the patient, advises them where the nearest defibrillator is located and how to unlock the storage cabinet. Wherever possible, a second person then collects the machine. The defibrillator automatically gives verbal directions on how to operate it. If you are interested in volunteering to be a CFR, visit www.emas.nhs.uk/get-involved/cfr/

They are there for us from day-to-day

Their responsibilities include our safety and infrastructure maintenance.

Southwell Town Council

- The Town Council has no statutory authority and no funding to deal with emergencies but works with SFF on the Emergency Communications Hub which will provide a central point of communication, keep records and provide information to relevant agencies to enable them to assist and advise affected residents (*see page 9*). After an incident it will endeavour to keep residents informed as appropriate.
- The Council's part time employees work 10.00am – 12.30 pm. Monday to Friday.
- Certain devolved responsibilities from NSDC – car parks, toilets and market.
- A lengthsman is employed, paid for by NCC to carry out maintenance works e.g.
 - grass cutting and cutting back overhanging hedges, ensuring visibility of traffic signs
 - clearing drains and minor storm debris
 - tidying roadsides, digging out ditches in verges
 - repainting traditional finger and mile posts
- Safety issues will be reported to NCC.
- Some grit buckets are available around town.



Newark & Sherwood District Council

- Plan and prepare for possible emergencies within the district.
- Keep council land clear of litter and refuse.
- Action on fly-tipping when reported.
- Local planning authority.



Nottinghamshire County Council

- Gully cleansing, footpath maintenance.
- During winter weather NCC grit A and B roads and major bus routes, plus some additional routes during severe weather.
- NCC is the Lead Local Flood Authority, working alongside partners to manage flooding from local sources: surface water, ordinary watercourses and groundwater.



- NCC, as Highways Authority ensures that relevant standards are applied to works undertaken and that road projects do not increase flood risk. You can find more about publicly maintained roads at goo.gl/Ud1IUZ.
- Maintain Emergency Plan for the whole County with dedicated staff.

Environment Agency



- Build and maintain flood banks on main rivers such as the River Greet and ensure flood water can flow freely.
- Provide advice on climate change.
- Protect the environment and respond to reports of pollution.
- Warn when flooding is expected from main rivers and provide advice.

Severn Trent

- Burst water mains.
- Flooding from a public sewer.
- Supply potable (drinkable) water.



Trent Valley Internal Drainage Board

The work of TVIDB includes the maintenance of



ordinary watercourses and pumping stations, facilitating drainage for new development and advising on planning applications.

Western Power Distribution

- Responsible for the safe delivery of a reliable power supply.
- Not an electricity supplier (to whom you pay your bill).



National Grid

- Own and manage the grids that deliver electricity.
- All gas in the UK passes through National Grid's national transmission system.



What is mitigation?

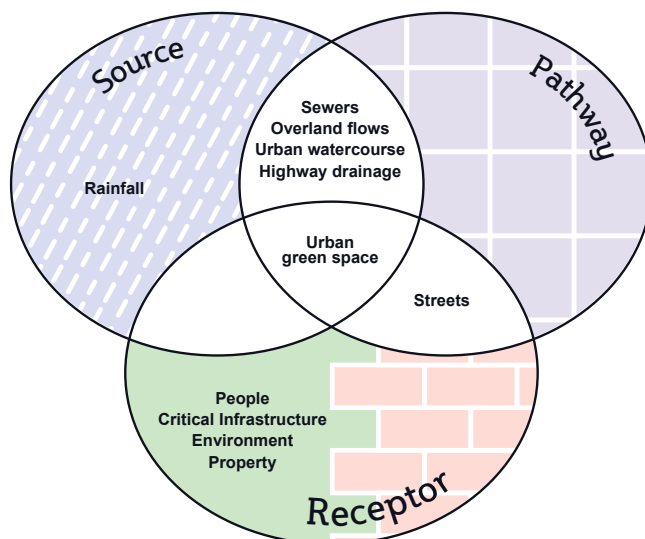
Southwell has suffered major flooding events in 2007 and 2013 when about 100 and 250 houses respectively were affected. As there had also been events such as in 1922 and other minor flooding incidents when a few houses were affected, the community demanded action. Nottinghamshire County Council as Lead Flood Authority are working towards implementing measures to reduce this risk.

The Flood Mitigation Plan for Southwell is based on the framework as set out in the DEFRA Surface Water Management Plan (SWMP) Guidance (2010) following a defined process of a) scoping and establishing partnerships; b) assessing flood risk; c) identifying and assessing mitigation options; d) implementing and reviewing.

The flood Consultants AeCOM (previously URS) produced a detailed Flood Study which was published in its final form in February 2016. It includes a Flood model which replicates the impact of heavy rainfall on the town and can be used to test potential mitigation options. It's a long and complex process because of the many paths that floodwater takes from our upstream rural catchment through our urban infrastructure plus the presence of such risks as pinchpoints, potential blockages or damaged drains. See Source Pathway, Receptor diagram (source: SWMP Technical annex – DEFRA)

JBA Consultants are continuing with the Mitigation Plan, working with residents and a Technical Sub-Group of local people with relevant expertise. The Forum has collated survey information and provided valuable input to the process to determine the most effective and beneficial options that may be implemented, depending on funding available which is based on a cost benefit ratio. Potential options include engineered solutions as well as natural flood management.

Any mitigation measures can be enhanced by everyone looking at what is possible at local level - ensuring driveways are permeable and adhering to planning regulations. The Neighbourhood Plan also aims to support sensible development.



Source, Pathway, Receptor Diagram

Sustainable Drainage Systems (SuDS)

“On new developments, builders have to ensure that the amount of storm water which runs off is less than the amount which would have run off prior to the new homes being built. On a Greenfield site the run off must be kept down to ‘Greenfield run off rates’. This can be done with, for example, storage attenuation tanks with controlled outflows as well as permeable driveways and soft landscaping.”

Steff Wright – CEO, Gusto Group

It is now a planning requirement for individual home owners not to increase their run off rates. Seek guidance about hardscaping front gardens – provision needs to be made for surface water runoff and planning permission may be needed from Planning Dept at NSDC. Even small changes on your own property can help reduce the town's flood risk. Consider permeable paths and driveways, soakaways, water butts, rain gardens, tree planting, swale, french drain – they can all have an impact.

“Gardeners can create a ‘mini’ mitigation area by planting a gravel garden which is low maintenance and drought tolerant or incorporating a rainwater garden feature – every little bit helps”

Chrissie Dale, Mrs D Design, Southwell

What is Natural Flood Management and What Does it Achieve?

Natural flood management (NFM) aims to reduce flood risk by working with natural processes to slow and store water in the upper catchment. This in turn reduces the amount of water reaching downstream settlements at a given point in time. The result of such strategies can help to reduce flood peaks. There are also wider benefits such as habitat creation, sediment capture, water quality improvements and combating climate change that can be achieved as a result of implementing NFM.



Large woody debris dam at Belford

What are the methods of natural food management?

Tree planting and riparian buffer strips aim to increase water infiltration into the soils, whilst methods such as bunding and wetland creation aim to retain water over short periods of time to be released slowly into the watercourses. Inserting large wooded debris into the upstream watercourses can hold back the flow, forcing water onto the floodplain and increasing channel roughness, all of which slow the flow of water to downstream reaches.

“We at Trent Rivers Trust (TRT) have experience in delivering NFM projects by working with farmers and landowners to develop schemes on their land to ensure farmers’ land and commercial interests are maintained throughout any NFM work. We have visited Southwell and are keen to look at potential NFM opportunities”.

Ruth Needham, Trent Rivers Trust

“Flooding in Southwell” – Josh Wells – PhD research

My research aims firstly to assess the extent to which natural flood management (NFM) in the upstream catchment can help to reduce flood risk. This will be achieved by implementing NFM measures within the Brackenhurst land and monitoring the impacts on the hydrograph (water level rise and fall).

Flooding is a complex issue with social and economic impacts so I am taking an integrated approach. This includes identifying the key barriers to NFM and evaluating the extent to which stakeholder engagement can influence the success of NFM in a wider context. This means I will be engaging with multiple agencies, authorities, the Southwell Flood Forum and residents of Southwell.



Josh taking flow readings



So far we have made good progress with NTU investing around £60,000 into the project. In addition to the three Brackenhurst rain gauges, five water level monitoring loggers have been installed within the Potwell Dyke catchment. A partnership with the Environment Agency has been set up which has funded the installation of four more water level loggers at a cost of £17,500, allowing for an increasingly detailed monitoring network to be created.

“This project is a good example of how Nottingham Trent University is committed to working in partnership with the local community to understand and solve key environmental issues. Our expertise in flooding combined with our ability to use our campus as an outdoor laboratory will provide new insight into local flooding problems.”

Professor Rob Mortimer, Dean of the School of Animal, Rural and Environmental Sciences, Nottingham Trent University, Brackenhurst Campus

Care of Watercourses

Southwell lies in a basin with many springs, feeding dykes and dumbles which run through the town – these are natural ‘drains’.

We are all responsible for looking after our watercourses.

Do not use riverbanks to dispose of grass cuttings, garden or other waste. Such debris could be washed into the river and accumulate, causing a potential blockage and pollution.

The nearest Recycling Centres are at Bilsthorpe, Newark and Calverton. You need to register at goo.gl/VFm7To

Use a composting bin or obtain a brown bin for garden waste from Mansfield District Council - 01623 463463

Report activity that could interfere with the flow of the water such fly-tipping, wilful damage or blockages

People who own land adjoining a watercourse (Riparian Owners) have the direct responsibility to ensure water has free passage through their stretch, but we can all ‘do our bit’ to help.

Riparian Owners

If you own land adjoining an ordinary watercourse, you have legal responsibilities. These include:

- allowing the flow of water to pass without obstruction
- obtaining permission to do any work on a bank

If you are not sure what you have to do and/or are new to living near a watercourse, ask your risk management authority for advice. goo.gl/mYpAlg

See a problem – report it* – don’t assume someone else has

- Blocked dykes, ditches and rain; water levels significantly raised
- Drains bubbling over
- Damage to pavement, road, cables
- Fly-tipping

* Report to goo.gl/rHv6oR

What do I do in an emergency?

Stay calm – being prepared helps enormously.

Listen to your local radio station for updates on the emergency situation, closures regarding bad weather etc.

Once you have an idea of the situation, you should follow your Personal Emergency Plan and begin to act accordingly.

- Contact the relevant emergency service if necessary and follow their instructions. Give them your name and number; time, details and location of emergency or incident.
- Switch off electricity and gas supplies at mains if necessary
- Pick up your pre-prepared grab bag
- Keep listening to local radio for updates
- Help vulnerable people and neighbours, evacuating them to safety if necessary
- Keep contact with your family and neighbours

In addition in the case of a flooding incident

- Prevent water from entering property, if possible (*see page 7*).
- Move your car to safety
- Move valuable possessions above floor areas liable to be flooded.
- Move to a safe area, if life is at risk. e.g. higher ground, family, friends, neighbour, designated place of safety
- If appropriate contact the Emergency Communications Hub
- Call Floodline if you need clarification (*see page 8*)

Quick Emergency Guide

The most likely emergencies to arise in Southwell are flooding, heavy snow/ice and electricity interruptions. Others include fire, explosion or chemical/biological escapes. Depending on the nature of the emergency, contact one of the numbers below.

Southwell Town Council Office (and Communications Hub in an emergency)	01636 816103
Communications Hub (only when a town-wide incident occurs – there will be a slight delay between the start of an incident and the Hub being operational.)	07467 208582 07467 208584
Environment Agency (Floodline emergency) e.g. rivers	0345 988 11 88
Environment Agency (Incident Hotline) e.g. pollution	0800 80 70 60
Nottinghamshire County Council (Emergencies) e.g. explosion	0300 50 80 80
Nottinghamshire County Council Highways Agency e.g. highways	01253 502 776
Nottinghamshire County Council Fire and Rescue Control Room	0115 967 5903
Newark & Sherwood District Council	01636 650000
Fire and Rescue, Ambulance or Police (Emergencies)	999
Police (Non-emergency)	101
Severn Trent Water (Emergencies)	0800 783 4444
NHS (non-emergency)	111
National Grid (Gas Emergency) e.g. fire, explosion, gas safety	0800 111 999
Western Power Distribution (Electricity Emergency)	0800 678 3105

Who does what in an emergency?

Nottinghamshire County Council and Highways Agency

- Put up flood warning signs and close roads and divert traffic – this can be legally delegated to the Road Closure Wardens (*see page 9*).
- Clear blockages on the road and in the drainage systems.
- May help protect property from flooding (if flooding is due to failure of the highway drains)
- Provide emergency accommodation in appropriate places

Newark and Sherwood District Council

- House people who are evacuated
- Advise on home and food safety
- Distribute sandbags but only in certain circumstances (*see page 7*)

Environment Agency

- Deal with emergency repairs and blockages on main rivers, some bridges etc.
- Respond to pollution incidents.
- Receive and record details of all flooding incidents.
- Issue flood alerts and warnings for main rivers

Fire and Rescue Service, Ambulance and Police

- Respond to emergencies – e.g. fires, explosions, accidents, floods etc.

Severn Trent Water

- Pump and/or provide tankers in emergencies
- Clear blockages in public sewers and outfall grills
- Repair burst sewage and water mains
- Protect property from flooding by water from mains or sewers
- Provide portable toilets (in some cases)
- Provide safe water

Western Power Distribution

- Respond to a power cut or damage to equipment such as overhead line down or hanging low.

National Grid (Gas)

- Respond to appropriate emergency incidents – e.g. fires, explosions, floods etc.
- Give advice on gas safety.

Information provided by Southwell Town Council.

Acknowledgements and Website Links

Department for Environment, Food and Rural Affairs (DEFRA)	www.gov.uk/government/organisations/department-for-environment-food-rural-affairs
East Midlands Ambulance Service (EMAS)	www.emas.nhs.uk/
Environment Agency (EA)	www.gov.uk/government/organisations/environment-agency
Flood Re	www.floodre.co.uk
Hazardous Area Response Team (EMAS)	www.emas.nhs.uk/our-services/hart
Lincolnshire & Nottinghamshire Air Ambulance	www.ambucopter.org.uk
Met Office	www.metoffice.gov.uk
National Grid	www2.nationalgrid.com/UK/Safety
Newark and Sherwood District Council (NSDC)	www.newark-sherwooddc.gov.uk
Nottinghamshire County Council (NCC)	www.nottinghamshire.gov.uk
Nottinghamshire Fire and Rescue Service	www.notts-fire.gov.uk/
Nottinghamshire Police	www.nottinghamshire.police.uk
Nottingham Trent University	www.ntu.ac.uk/ares
Nottingham University	www.nottingham.ac.uk
Severn Trent Water (STW)	www.stwater.co.uk/about-us
Southwell Community First Responders	www.emas.nhs.uk/get-involved/cfr/
Southwell Flood Forum (SFF)	www.southwellfloodforum.org.uk
Southwell Town Council (STC)	www.southwellcouncil.com
Trent Rivers Trust (TRT)	www.trentriverstrust.org
Trent Valley Internal Drainage Board (TVIDB)	www.wmc-idbs.org.uk/TVIDB
Western Power	www.westernpower.co.uk

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For further information contact info@southwellfloodforum.org.uk

Read me or listen to me at: www.southwellfloodforum.org.uk/resilience-handbook/

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