M5 Junction 10 Improvements Scheme

Environmental Management Plan

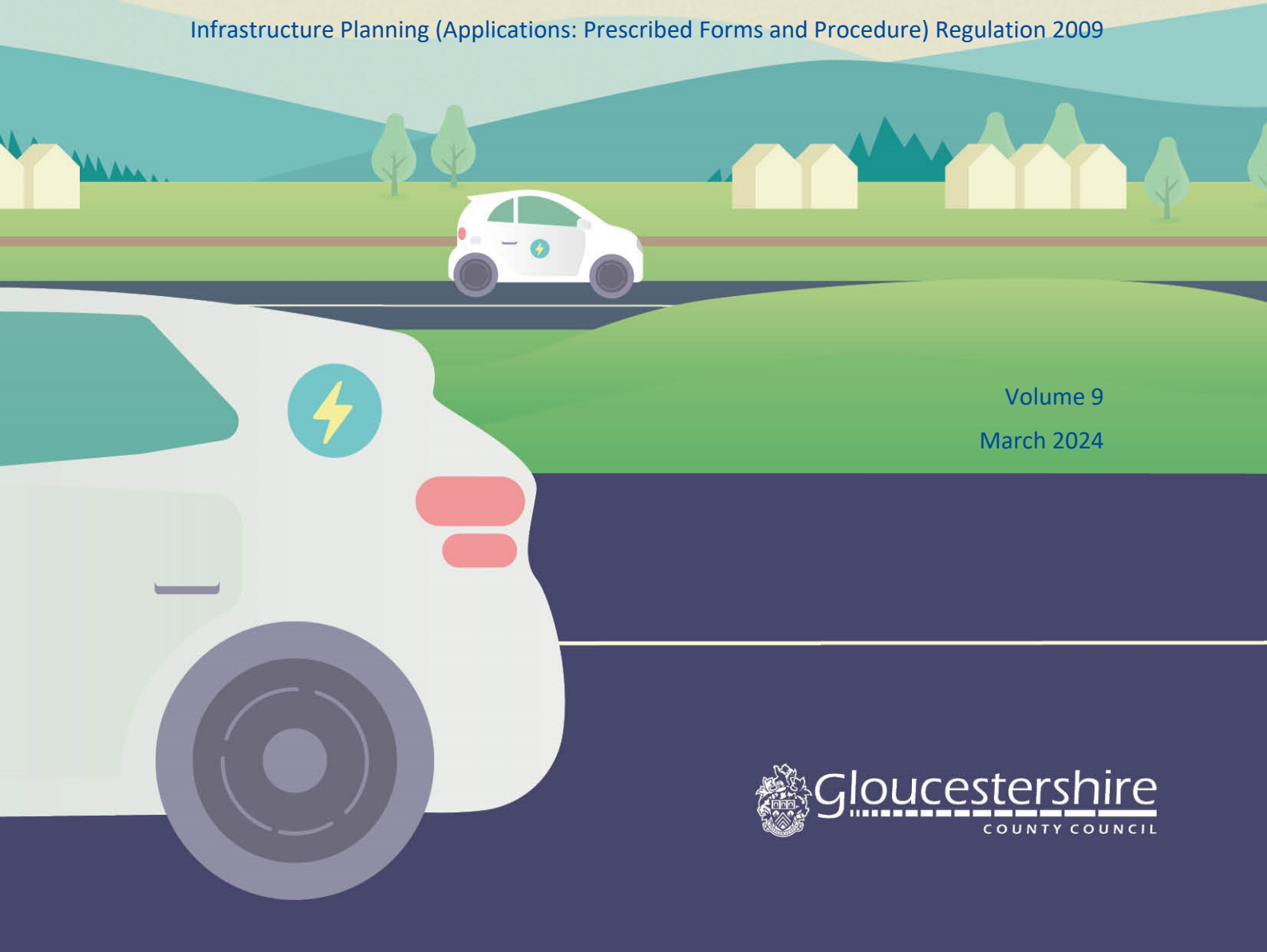
Annex B.6 Emergency Preparedness and Response Plan

TR010063 – APP 9.6

Regulation 5 (2) (q)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulation 2009



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Infrastructure Planning

Planning Act 2008

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

M5 Junction 10 Improvements Scheme

Development Consent Order 202[x]

Environmental Management Plan

Annex B.6 – Emergency Preparedness and Response Plan

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Contents

Chapter Page

Tables

Figures

B.6. Emergency Preparedness and Response Plan

B.6.1. Introduction

Purpose

B.6.1.1. This document forms Annex B6 of the Environmental Management Plan (EMP) (1st iteration) (Application document TR010063/APP/7.3). Annex B6 is an Emergency Preparedness and Response Plan (the Plan) (1st iteration) for the M5 Junction 10 Improvements Scheme (the Scheme). This Plan (1st iteration) will be updated by the appointed Principal Contractor (PC) into a Plan (2nd iteration), as required by Requirement 3 of the DCO, prior to commencement of works.

B.6.1.2. The Plan provides a framework for achieving the design objectives, mitigation and compensation measures outlined in the:

- Environmental Statement (ES) (Application document TR010063/APP/ 6.1 to 6.13).
- Flood Risk Assessment (Application document TR010063/APP/ 6.15).
- Water Framework Directive (WFD) Compliance Assessment (Application document TR010063/APP/6.15).
- Surface Water Quality Assessment (Application document TR010063/APP/6.15).
- Environmental Masterplan (Application document TR010063/APP/2.13).

B.6.1.3. The Plan identifies measures to be taken in the event of a pollution or flood risk incident; how they will be implemented, managed, maintained and monitored; and who will be responsible for ensuring they achieve their stated functions.

B.6.1.4. This Plan has been produced to ensure incidents are managed to meet the following broad objectives:

- Pollution incident response – outline the actions required to ensure the site team is prepared to respond to an incident and set out the procedures to be taken in the event of a pollution incident. This will help reduce the potential for a pollution incident and reduce any harmful effects to the water environment.
- Flood warning and evacuation – outline the activities which should be undertaken to ensure the site team is prepared to take action at appropriate stages in the lead up to and during a potential flood emergency.

B.6.1.5. This Plan should be read in combination with Annex B7 – Pollution Prevention and Control Management Plan (Application document TR010063/APP/9.7) to understand measures to mitigate pollution incidents.

Environmental Statement

B.6.1.6. This 1st iteration Plan supports Chapter 8: Road Drainage and the Water Environment of the ES (Application document/TR010063/APP/6.6) and has been prepared to demonstrate how to respond to pollution incidents and how to prepare for an emergency in relation to flooding during the construction phase of the Scheme.

Register of Environmental Actions and Commitments

B.6.1.7. The following items are recorded in the REAC as they relate to the Emergency Preparedness and Response Plan.

Table B 6-1 - Emergency Preparedness and Response Plan REAC

REAC	Commitment Text	**Implementation mechanism**
C1	Reducing the impacts of extreme weather on construction processes/activities.	EMP (1st iteration) (Application document TR010063/APP/7.3) Annex B6 – Emergency preparedness and response management plan.
WE1	Minimising deterioration in surface water quality resulting from construction activities.	EMP (2nd iteration). All Plans.
WE15	Minimising impacts on flood risk as a result of the construction of the Scheme.	EMP (1st iteration). Annex B6 – Emergency preparedness and response management plan.

B.6.2. Emergency preparedness and response

Legislation, regulations and other requirements

B.6.2.1. The construction works will comply with all relevant legislation and regulations to ensure legal construction works as outlined in Chapter 8 Road Drainage and the Water Environment of the ES (Application document TR010063/APP/6.6).

B.6.2.2. Other requirements from the Local Authorities (Gloucestershire County Council and Tewkesbury Borough Council), National Highways or other statutory bodies (such as Natural England) will be reviewed by the PC and applied where applicable.

B.6.2.3. All work carried out will be conducted with due cognisance of client standards, obligations and UK best practice.

B.6.2.4. A legislation register will be maintained by the PC and updated following any changes to applicable legislation. Any applicable changes will be evaluated and communicated to the relevant personnel through environmental alerts, newsletters, staff briefings or toolbox talks. Site-specific procedures will also provide guidance to activity specific legislation.

Project team roles and responsibilities

B.6.2.5. Please refer to Section 2, in particular Table 2-2 of the EMP 1st iteration (Application document TR010063/APP/7.3) for project team roles and responsibilities. Roles and responsibilities of specialist emergency preparedness and response (pollution and flood risk) personnel will be detailed in the Plan in the next iteration.

B.6.3. Pollution incidents

B.6.3.1. This section sets out the requirement of the Pollution incident preparedness and response plan which will be updated by the PC prior to commencement of works. The section below outlines tasks to be undertaken prior to commencement of works and activities to ensure the site is prepared to respond to an incident.

B.6.3.2. All construction work will be completed in line with the following guidance:

- Environment Agency's Pollution Prevention Guidance (PPG)[1]

[1] Although these guidelines have been withdrawn from the Environment Agency, they remain relevant to pollution management.

- PPG 1 – Understanding your environmental responsibilities – good environmental practices[2] which outlines general pollution prevention and the correct storage of materials.
- PPG 8 – Managing fire water and major spillages[3] which provides good practice for the protection of the environment in the management of run-off generated in the event of fire (or fire water) and major spillages.
- PPG 21 – Incident response planning which set out best practice for producing an incident response plan to deal with an environmental incident.
- PPG 22 - Dealing with spills[4]. This guidance provides measures to prevent, limit or reduce the damage to the environmental and human health from a spill.
- PPG 28 – Controlled Burn[5] which sets out the method for producing a risk assessment for incidents not only those associated with controlled burns.
- Construction Industry Research and Information Association (CIRIA) technical guidance.
- CIRIA 736 - Containment systems for the prevention of pollution (C736F).

Preventing an incident

B.6.3.3. This section of the Plan will be updated by the PC pursuant to requirement 16 of the DCO. The Plan should be scaled to the level of risk and complexity of the construction. The Plan should be kept up to date and should be communicated to staff and contractors who should demonstrate they understand the requirements of the Plan. To reduce the potent impact from a pollution incident, the construction team and on-site staff must be prepared to respond to a pollution event. The initial stage of the Plan outlines the measures which should be taken to ensure the construction team is prepared to respond to an incident:

- Risk Assessment should be undertaken to identify where there is a potential for a pollution incident to ensure sufficient mitigation can be implemented. This will include identification of the source, pathway, receptors and magnitude of potential harmful effects. The specific requirements of a Risk Assessments are outlined in PPG 28 – Controlled Burn.
- Maintain an up-to-date record of all substances stored on the construction site together with an indication of the maximum quantity likely to be stored and locations of all stores, bulk storage vessels, drums and containers used to store potentially polluting materials. Attach product data sheets for the Control of Substances Hazardous to Health (COSHH).
- Record all equipment and materials available to deal with pollution incidents along with contact details for anyone with specific training for their use. Equipment could include:
  - Absorbents.
  - Drain mats/covers.
  - Pipe blockers.

[2] Environment Agency (2013). Pollution Prevention Guidance : PPG1. Online: Title (publishing.service.gov.uk) (Accessed 29 February 2024).
[3] Environment Agency (2022). Managing Fire Water and Major Spillages: PPG18. Online: EnvAgency PPG18_6pp (netregs.org.uk) (Accessed 29 February 2024).
[4] Northern Ireland Protection Agency, Scottish Environment Protection Agency and Environment Agency (2011). Pollution Prevention Guidelines: Dealing with Spills PPG 22. Online: Title (technokontrol.com) (Accessed 29 February 2024).
[5] Environment and Heritage Service, Scottish Environment Protection Agency and Environment Agency (2007). Pollution Prevention Guidelines Controlled Burn: PPG28. Online: pmho1005bjit-e-e.pdf (publishing.service.gov.uk) (Accessed 29 February 2024).

  - Booms.
  - Pumps.
  - Over drums.

- Produce a site plan showing layout and access details, along with a schematic representation of the site drainage arrangements. The plan could include, but is not limited to building layout, emergency meeting points, on site treatment facilities, watercourses, unmade ground or other receptors and site drainage.
- Drainage plans of the site should be available and attached to the management plan.
- Ensure that suitably trained members of staff are available to respond to incidents along with procedures for alerting these staff members and the standby/rota system. This will include a suitably qualified member of the team to co-ordinate any initial response being available 24/7. This could include implementation of pollution mitigation measures which could prevent a leakage or spill from becoming a major incident.
- Ensure all relevant staff know how and when to contact other emergency responders: emergency services, local authority, sewage undertaker and other organisations identified in the emergency plan.

In the event of an incident

B.6.3.4. The following paragraphs detail incident response measures that will be in place to reduce the impact of a pollution incident on the water environment.

B.6.3.5. The following list is included as an example of the criteria for incident reporting and is not meant to be exhaustive. It may also be influenced by factors such as the environmental sensitivity of the site. Discussions with the Environment Agency will set out the parameters of when it should be informed of environmental incidents where they deviate from the below or where further clarification of the criteria is required:

- Spillages or fires involving substances covered by the Carriage of Dangerous Goods Regulations.
- Spillages of Low Hazard products with polluting potential (Table B6-2).
- Petrol spillages greater than 100 litres.
- Hydrocarbon spillages greater than 20 litres (Inc. hydraulic oils and cutting oils).
- Any spillages in or near watercourses.
- Major incidents within combined drainage areas.
- Incidents involving hazardous fly tipped waste.
- Incidents involving radioactive materials.
- Incidents actually or potentially affecting environmentally sensitive locations.
- Incidents involving flooding from Main River, watercourses or where actions or incidents have occurred that could increase the risk of future flooding (see Note 3).
- Significant releases of silt/sands/cement slurry.

Table B 6-1 Low hazard products and thresholds

Substance	Threshold	Example
Detergents	25 litres	Washing powder, washing up liquid, shampoos, soaps and car cleaning products
Disinfectants	25 litres	Household bleach

Food stuffs	250 litres	Most have the potential to cause problems, but of particular concern are sauces, sugars, salt, syrups, milk, cream, yoghurt and vinegar.
Beverages	250 litres	Soft drinks, beers, lagers, wines and spirits
Fertilisers	25 Kg	All
Paint or dye	25 Kg	All
Other organic liquids/slurries	Varies	Blood, offal, farmyard slurries, firefighting foams, sewage sludges, antifreeze, cutting, lube and cooking oils, glycerine, alcohols, latex, water soluble polymers

B.6.3.6. The list below gives suggested response procedures which may be required depending on the scale of the pollution incident. Any checklist should not be limited to these suggestions but based on the specifics of the construction:

- Ensure all relevant staff know how and when to contact other emergency responders: emergency services, local authority, sewage undertaker and other organisations identified in the emergency plan.
- Consider the impact that an incident on the site could have on the environment outside the site boundary: nearby properties, downstream abstractors, agricultural land or environmentally sensitive sites.
- Use the pollution control hierarchy as outlined in PPG 22[4] to plan the spill response by either:
  - 1. Containing at source.
  - 2. Containing close to source.
  - 3. Containing on the surface.
  - 4. Containing in the drainage system.
  - 5. Containing on the watercourse.
- Consider site specific pollution control options such as containment lagoons and ponds, sacrificial areas, pits and trenches or spill containment tanks.
- Put in place staff evacuation procedures.
- Identify any special methods needed to deal with substances posing particular health or environmental risk.
- Develop a firefighting strategy with the local fire and rescue service. if a controlled burn is an agreed option, state this clearly. The same applies to the use of foam.
- Identify procedures for recovering spilled product and the safe handling and legal disposal of any waste associated with the incident. The clean-up can be undertaken by UK spill accredited contractors.
- Staff should be available who are trained to deal with media enquiries.

B.6.4. Flood warning and evacuation

B.6.4.1. This section sets out the requirement of the Flood Warning and Evacuation Plan (FWEP) and a Severe Weather Plan (SWP) which will be produced by the PC in the 2nd iteration EMP. The section below outlines tasks to be undertaken prior to commencement of works, activities to ensure the site is prepared for a flood event and ensure effective and safe evacuation of personnel (plant and materials if safe to do so) from areas at risk on receipt of severe weather or a flood warning.

Prior to commencement

B.6.4.2. Table B6-3 outlines actions which should be undertaken prior to commencement of construction activities and will be developed as part of the FEP in the 2nd iteration EMP.

Table B 6-2 Pre-commencement actions

Action	Further instructions
Complete a Severe Weather Plan	Produce a SWP to understand and update where necessary to account for changes in evacuation routes to reflect changes in land ownership and tenancy or on site construction works.
Complete a Flood Warning and Evacuation Plan (FWEP) and make updates to take into account new or additional information.	Update the FWEP as necessary such as at any change or reinstatement of evacuation routes to reflect changes in land ownership and tenancy or on site construction works.
Register with the Environment Agency Flood Warning Service.	Registration with the Flood Warning Service online[6] or by calling Floodline on 0345 9881188.
Ensure construction personnel are aware of the FWAP and are trained sufficiently to implement the procedures set out in the Plan.	Disseminate the Flood Warning and Evacuation Plan and procedures to contractors. Designated evacuation sites, routes and congregation points should be located on public land outside the flood risk areas identified in Figure B 6-1 and B 6-2. showing the 0.1% annual exceedance probability event (1 in 1000-year return period) flood extents before and after the Scheme.

[6] Gov.uk (2024) Flood Warning Service. Online: Sign up for flood warnings - GOV.UK (www.gov.uk) (accessed 29 February 2024).

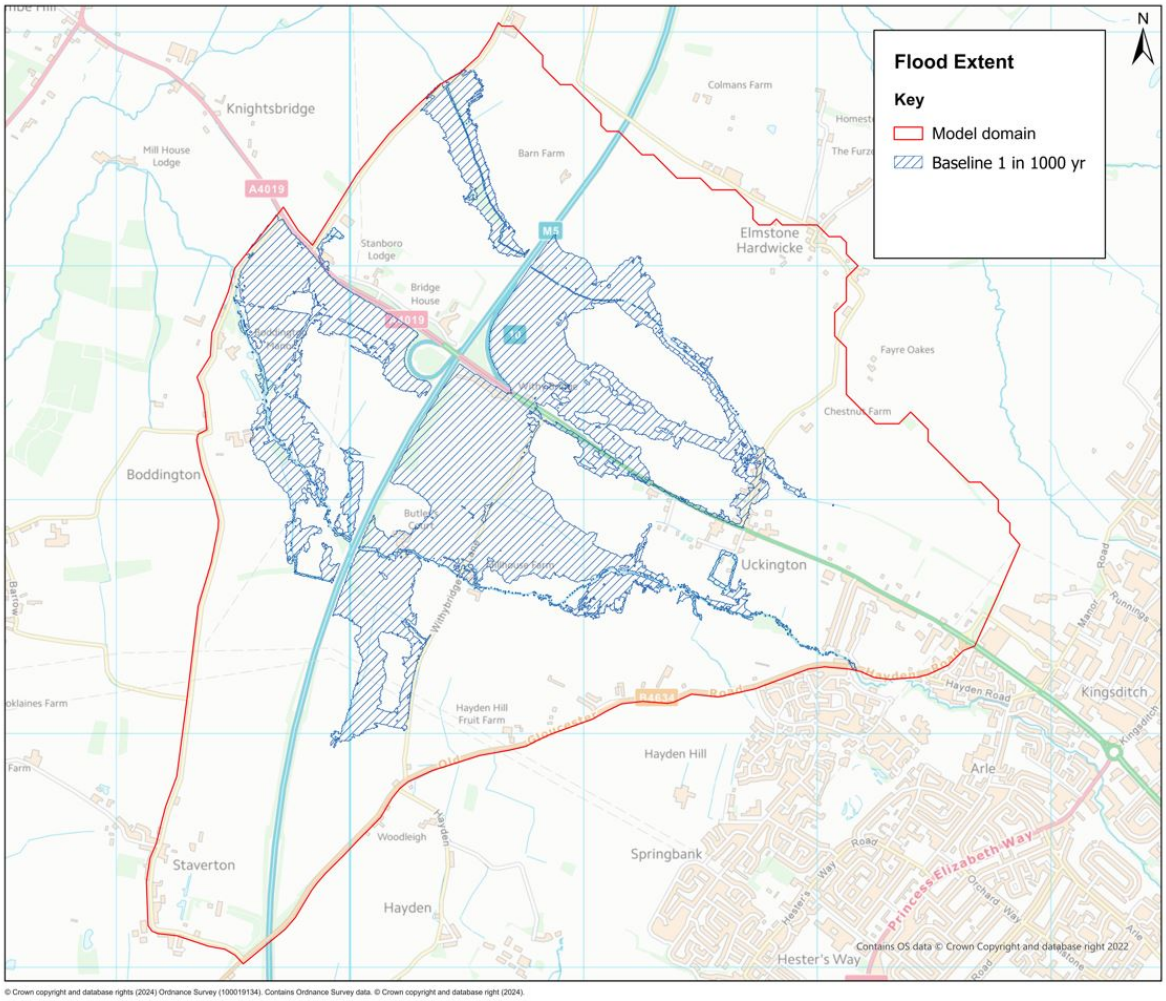

Figure B 6-1 - Baseline flood risk extents in the present day 1 in 1000 year scenario

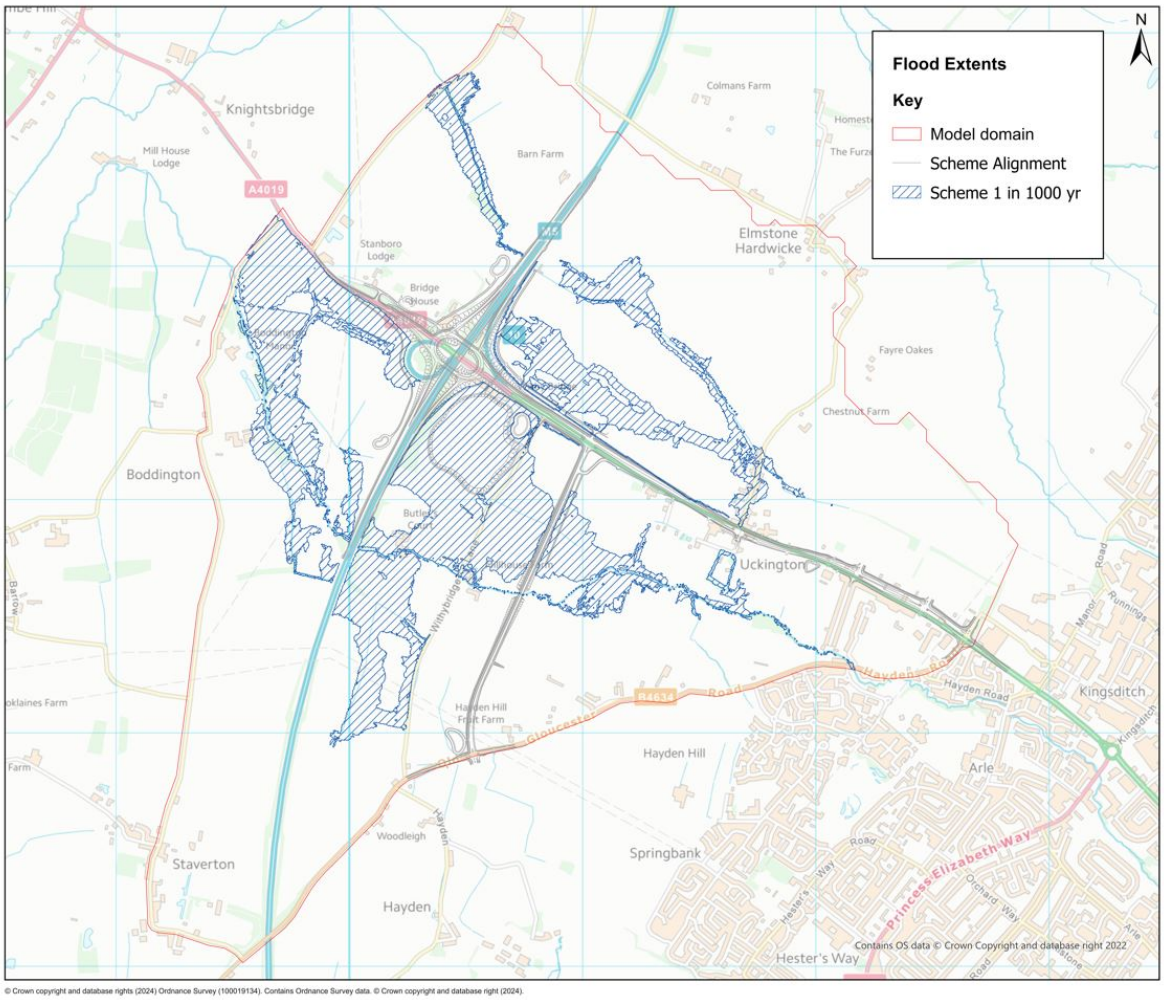

Figure B 6-2 - With Scheme flood risk extents in the present-day 1 in 1000 scenario

Training

B.6.4.3. Ensure that all named persons and site agents are briefed on the procedures for evacuation contained within the Flood Management Plan. The training for construction personnel would, as a minimum, cover:

- Requirements of the FEP.
- Confirmation of named roles, clearly identifying positions held, responsibilities, communication and chain of command.
- Staff duties.
- Evacuation routes.
- Staff safety during a flood event.
- Electrical systems emergency shut off procedures.
- Movement of loose items into secure compounds if practicable.
- All construction staff shall be trained as part of the site induction process.
- Flood management and evacuation drills should be conducted annually.
- All staff should be made aware of emergency contacts in the event of an emergency such as the emergency services, the Environment Agency, Local Authorities, and utility providers.
- All staff shall be re-trained annually.

Management and evacuation

B.6.4.4. The construction works should be phased to ensure that there is sufficient flood storage available prior to the construction of Scheme elements which have the potential to reduce flood storage. For example, the flood compensation area and flood storage areas should be constructed prior to construction of the link road or motorway junction. Detailed flood risk modelling of the construction phase is likely to be a requirement of the Temporary Flood Risk Activity Permit. The modelling will need to show that the sequencing of construction allows for sufficient compensatory flood storage to be provided to ensure no increased risk of flooding during construction.

B.6.4.5. As an overarching approach, the Environment Agency 5-day flood risk outlook service shall be monitored by the Designated Site Agents, as outlined in Table 2-2 of the EMP 1st iteration (Application Document TR010063/APP/7.3), on a daily basis to keep abreast of any increase in flood risk prior to any formal warnings being issued. Although the 5-day warning system is more of a national / regional service, if the construction site location is flagged as at risk within the next 5 days, then additional monitoring and resources will be put in place by the Environment Agency to provide a heightened awareness of changing risks. This will then ensure that sufficient timing is provided for the three trigger warnings, all of which would have a minimum of 2 hours lead time, but more likely a notice of 24 hours. Monitoring therefore can provide a wide window of opportunity to mobilise the emergency plan and not return to site if adverse weather / flooding is forecast.

B.6.4.6. As a minimum, the Construction Manager, Site Manager and Project Team Managers should all sign up to the Environment Agency Flood Warning Service so that when the Environment Agency issues a flood alert or warning, the service would send an automated warning message to all registered to the service.

B.6.4.7. The three Environment Agency Flood Warning levels; are outlined in Table B6-4 with actions and procedures to be taken at each level. The PC will update these actions as appropriate prior to construction.

B.6.4.8. As detailed, the Environment Agency Flood Warnings identify a ‘potential’ rather than ‘actual’ threat. It should be noted that not all events would result in an automatic progression from one warning to another with the end-result being flooding and evacuation of the site. It is possible for smaller events to trigger initial warnings with water levels subsequently falling before flooding of the site occurs.

B.6.4.9. Should water levels within the surrounding environment exhibit a sustained fall at any point during the event, this would be identified by the river level monitors and an automatic notification sent via the Environment Agency Flood Warnings system. With notification that the river level is falling the relevant Project Manager can downgrade the response to 0- Very Low Risk at the site.

B.6.4.10. The Plan shall be subject to update by the and review from the PC whenever there are key changes to the details held within it particularly when management, land ownership, occupancy and/or residency changes.

B.6.4.11. The Plan shall be reviewed at least once a year. Project Managers will ensure that an up-to-date version of the Plan is always available on site.

Table B 6-3 Environment Agency Flood Warning and evacuation trigger levels and procedures

Trigger Level	Risk of flood event occurring	When it is issued	What to do	Procedures to follow
0 – Very Low Risk	Very low risk	When river or sea conditions begin to return to normal.	• Be careful. Flood water may still be around for several days after an event. • If you've been flooded, ring your insurance company as soon as possible.	N/A

1 – Flood Alert	Low risk	Two hours to several days in advance of flooding.	• Be prepared to act on your flood plan.
			• Prepare a flood kit of essential items.
			• Monitor local water levels, weather reports and the flood forecast on the Environment Agency website.
			  ◦ https://flood-warning-information.service.gov.uk/river-and-sea-levels
			  ◦ https://flood-warning-information.service.gov.uk/long-term-flood-risk
				• Site Manager to review Flood Management Plan procedures – check procedures are still applicable and update if necessary.

2 – Flood Warning	Medium risk	Two hours to more than one day in advance of flooding.	• Turn off gas, electricity and water supplies if safe to do so. • Secure site equipment if possible. • Stay in a safe place with a means of escape. • If residential move things upstairs or to safety. • If residential move family, pets and car to safety	• Site Manager to notify site workers on State of readiness Alert, representing a state of readiness ahead of a potential flood event, by explaining the steps that will follow in the event of a Severe Flood Warning or Actual Flood Event.

Trigger Level	Risk of flood event occurring	When it is issued	What to do	Procedures to follow
3 – Severe Flood Warning	High risk	When flooding poses a significant threat to life. Two hours to more than one day in advance of flooding.	• Be ready should you need to evacuate using the routes in the evacuation plan. • Co-operate with the emergency services. • Call 999 if you are in immediate danger.	• Site Manager to immediately prepare for an evacuation of the potentially affected sites. • Site Manager to contact the Emergency Services and Environment Agency to confirm that evacuation preparations are being undertaken due to possible risk of flooding. • Site Manager to operate the emergency electrical shut off switches terminating the electricity supply and all power supplies to the site ensuring isolating supplies will not risk safety critical systems.
4 – Actual Flood Event	N/A	No formal warning.	• evacuate using the routes in the evacuation plan. • Co-operate with the emergency services. • Call 999 if you are in immediate danger.	• Site Manager to activate available site alarms, e.g. fire alarm, non-powered klaxon, to notify site workers of an immediate need to evacuate site. • Site Manager to operate the emergency electrical shut off switches terminating the electricity supply and all power supplies to the sites ensuring isolating supplies will not risk safety critical systems. • Site Manager to commence site evacuation and use allocated evacuation routes to facilitate / direct the safe evacuation of all personnel. • Site Manager to take a register to ensure all workers are accounted for and left the site. • Site Manager to notify Emergency Services.

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