

# HAMPSHIRE COUNTY COUNCIL

## Decision Report

<b>Decision Maker:</b>	Executive Member for Climate Change and Sustainability
<b>Date:</b>	23 September 2021
<b>Title:</b>	Project Appraisal: A32 Farringdon and Chawton Flood Alleviation Scheme – Phase 2
<b>Report From:</b>	Director of Economy, Transport and Environment

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### Purpose of this Report

1. The purpose of this report is to request funding approval for Phase 2 of the A32 Farringdon and Chawton Flood Alleviation scheme following completion of Phase 1. Phase 1 was previously approved in September 2017. The aim of the flood alleviation scheme is to improve the management of both surface and groundwater conveyed by ordinary watercourses adjacent or near to the A32 highway through the village of Lower Farringdon, and by a main river to Chawton village.

### Recommendations

2. That the Executive Member for Climate Change and Sustainability approve the Project Appraisal for A32 Farringdon-Chawton Flood Alleviation Scheme – Phase 2, as outlined in this report.
3. That approval be given to procure, spend and enter into necessary contractual arrangements, in consultation with the Head of Legal Services, to implement the proposed improvements to carry out survey and drainage works, as set out in the supporting report, at an estimated capital cost of £386,000 to be funded from the Flood Risk and Coastal Defence (FRCD) Programme budget.
4. That authority to make the arrangements to implement the scheme, including minor variations to the design or contract, be delegated to the Director of Economy, Transport and Environment.

### Executive Summary

5. This report seeks to explain the flooding which impacts both the villages of Lower Farringdon and Chawton, affecting residents, businesses and those

that use the A32 highway, and to detail the measures to be implemented as part of Phase 2 of the flood alleviation scheme, setting out the scheme costs and the funding contributions.

6. In the winters of 2013/14, 2000/01, 1960, 1947, 1918 and to a lesser extent, other years, groundwater rose in Lower Farringdon area and mixed with surface water run-off from extensive rainfall, discharged onto the A32 near Kitcombe, and flowed towards the Lower Farringdon crossroads. In 2014, flooding lasted from the beginning of February to the end of April. During this flood incident, approximately 22 properties or their curtilage were directly impacted with 10 internally flooded. Even with emergency measures, the A32 was closed for 2 months. This caused significant access and travel disruption to local residents and businesses.
7. Further flooding issues downstream of Lower Farringdon included flood waters effectively cutting off access to Chawton House, and surface water infiltration to combined sewer overflows in Chawton resulting in impacts on domestic sewage systems from the reduction in carrying capacity. Eight homes in the Chawton area were also affected by foul water disruption and would have had internal flooding had emergency measures not been taken.
8. Following a series of investigations and assessments of the flood event, the County Council undertook feasibility and investigative work to determine the causes of the flooding and investigate potential measures to alleviate flooding in Kitcombe, Lower Farringdon and Chawton.
9. A package of initial measures for Lower Farringdon and Chawton has now been implemented.
10. Phase 1A involved extensive topographical and CCTV survey, intrusive groundworks, and work to ditches, pipes, gullies and soakaways to determine the cause of the flooding from Mary Lane to Lumbry Park. Phase 1B reinstated some of the capacity and conveyance of the west side of the southern (upstream) part of the existing watercourse north from Mary Lane to Woodside Lane (north of the crossroads in Lower Farringdon).
11. Phase 2 will follow on from Phase 1 works and is planned to proceed in two parts. Phase 2A works (upstream of Woodside Lane) will restore connectivity on the east side of the A32, add another culvert to cross the A32 and add additional conveyance capacity in the highway from Annetts Farm to the north end of Lower Farringdon, with minor highway works at Kitcombe. Phase 2B will focus primarily on improvements to the remaining downstream length of the existing winterbourne from Woodside Lane to Chawton and on to Lumbry Park. The objective is to restore the capacity of the 'main river' to manage surface water flows during periods of high groundwater levels.
12. It is planned to carry out Phase 2A by the end of 2021 and undertake Phase 2B following the winterbourne season in the spring/summer of 2022.
13. Once implemented, measures will manage the conveyance of surface and groundwater, reducing the risk and severity of flooding on the A32 and to adjacent properties and businesses. Restoration of the principal route through the fields and gardens in a managed way will give the highest priority of protection to homes adjacent to highway.

14. The future success of the works undertaken in Phase 2 will be dependent upon riparian owners undertaking regular maintenance works. The County Council expects riparian owners to fulfil their duties. In the event that maintenance doesn't take place, the County Council and the Environment Agency may take enforcement action or carry out maintenance, and re-charge the riparian owner.
15. Some work is being undertaken on 3rd party land where the watercourse deviates from the highway. The County Council is seeking to achieve access to undertake these works through negotiation and discussion but will use available powers if necessary.

### **Background (Contextual Information)**

16. Lower Farringdon and Chawton, and the location of the measures outlined in this project appraisal, fall within the catchment area of the west branch of the Caker Stream (River Wey) and is part of the River Thames basin. Surface waters flow north along a network of ordinary watercourses and become designated as a main river (River Lavant) approximately mid-way between Lower Farringdon and Chawton - immediately adjacent to and east of the A32 highway - before turning east, south of Alton, to join the Caker Stream. The total area of the catchment is in the region of 88km<sup>2</sup>.
17. Kitcombe is situated on the A32 highway approximately 6km south of Alton, with Lower Farringdon about 4km south of Alton, and the village of Chawton about 2km south of Alton. The A32 is a strategic north/south route linking the A31 at Alton with the A272 at West Meon and the M27 at Fareham.
18. Following many weeks of sustained exceptional rainfall between September and December 2000, Lower Farringdon suffered severe flooding which resulted in the A32 being closed and 16 homes being evacuated in December 2000. Flooding was widespread and long standing, but eventually waters receded in June 2001. By 2006, 12 of the 16 homes damaged by the flooding in Chase Field had been demolished.
19. In the winter of 2013/14, groundwater rose again in Lower Farringdon and mixed with surface water run-off from extensive rainfall, discharged onto the A32, and flowed towards the Lower Farringdon crossroads. Flooding lasted from the beginning of February 2014 to the end of April 2014. During this flood incident, approximately 22 properties or their curtilage were directly impacted with 10 internally flooded (mostly cellar). Had preventative emergency measures not been taken, all 22 properties would have experienced internal flooding. Even with emergency measures, the A32 was closed for 2 months. This caused significant access and travel disruption to local residents and businesses.
20. Further flooding impacts downstream of Lower Farringdon included flood waters effectively cutting off access to Chawton and Chawton House, and surface water infiltration to combined sewer overflows in Chawton. Eight

homes in the Chawton area were affected by foul water disruption and five by groundwater flooding.

21. Given the effect of the flood event on residents, businesses, and infrastructure, investigations and feasibility studies were undertaken between 2016 and 2020, with a first phase of works along the highway completed between 2018 and 2020. Funding from the Defra Flood Defence Grant in Aid (FDGiA) and Thames Regional Flood and Coastal Committee (RFCC) Local Levy has now been secured to support a second phase of measures in Kitcombe, Lower Farringdon, and Chawton building on Phases 1A and 1B.

## Finance

22. In September 2017, approval was given by the Executive Member for Environment and Transport for the implementation of Phase 1 of the A32 Farringdon Flood Alleviation Measures utilising funding from the County Council's Flood Risk and Coastal Defence (FRCD) capital programme.
23. Following completion of Phase 1, a design was prepared to make further improvements to the system and a business case was submitted to the Environment Agency to secure Defra FDGiA and Thames RFCC Local Levy funding. Based on the outcomes and benefits achieved from the overall investment, in accordance with national Flood and Coastal Erosion Risk Management (FCERM) funding formulas, the business case secured £317,000 Defra FDGiA, and Thames RFCC Local Levy. The County Council had already approved and committed £292,000 towards the first phase of work and it is proposed that further partnership funding of £69,000, met from the County Council's FRCD capital programme, is now contributed to the delivery of Phase 2. In addition to the above national and regional funding allocations, the Environment Agency also approved a FDGiA contribution of £120,000 towards the costs incurred by the County Council during the early feasibility stages.
24. This Project Appraisal seeks approval for Phase 2 at an estimated cost of £386,000.

<u>Estimates</u>	<u>£'000</u>	<u>%of total</u>	<u>Funds Available</u>	<u>£'000</u>
		29	Flood Risk & Coastal	69
Design	110.0			
Client Fee	22.5	6	Defence Programme	
Supervision	36.0	9		
			Defra Flood Defence	317
			Grant in Aid (GiA) and	
			Thames RFCC Local	
			Levy	
Construction	217.5	56		
Land	0	0		

Total	<u>386</u>	<u>100</u>	Total	<u>386</u>
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<u>Maintenance Implications</u>	<u>£'000</u>	<u>% Variation to Committee's budget</u>
Net increase in current expenditure	1	0.001%
Capital charges	37.0	0.023%

### Programme

25. The programme of works is outlined below.

Stage	Date
Phase 2a	Autumn/Winter 2021
Phase 2b	Spring/Summer 2022

### Scheme Details

26. It is proposed that subsequent work is undertaken in two phases but some parts of each phase may occur in the other due to possible seasonal restrictions.
27. Phase 2A is to improve the capacity and conveyance of the east side of the southern (upstream) part of the existing watercourse from Mary Lane to Woodside Lane, including Lower Farringdon. The works would include:
- restoration and improvement of existing ditches and pipework on the eastern side of the A32;
  - condition survey, improvement and clearance of all existing culverts and pipes; and
  - installation, replacement, upsizing or realignment of pipes/ditches/swales across private gardens and fields to provide continuity of the network.
28. Phase 2B is to improve capacity and conveyance of the northern (downstream) part as well as the management of the watercourse and winterbourne (main river) from north of Woodside Lane to Chawton and Lumbry Park. The works would include:
- installation, replacement, upsizing or realignment of pipes / ditches / swales across private gardens and fields to provide continuity of the network;
  - improvement and clearance of all existing culverts and pipes;
  - installation of measures to manage the conveyance of the winterbourne and upstream issues in a passive manner; and

- removal of further vegetation (as necessary) to ensure flow paths are clear and unhindered.
29. A General Arrangement showing the extent of the proposals can be seen in Appendix A of this Project Appraisal report.
  30. Once implemented, Phase 2 measures will improve the management of surface and groundwater conveyance, reducing the severity of flooding on the A32 and enabling it to remain open, and giving priority protection to homes.
  31. It is planned to carry out Phase 2A by the end of 2021 ahead of the flood season with delivery by the Hampshire Highways Term Contractor (Milestone) and undertake Phase 2B in the spring/summer of 2022. Some minor works may occur between summer of 2022 and spring 2023 due to possible impacts on bird nesting season and/or groundwater levels.

### **Departures from Standards**

32. There are no departures from standards.

### **Consultation and Equalities**

33. Quarterly Multi-Agency meetings with the Parish Council, East Hampshire District Council, Environment Agency and Thames Water have been held to date, in addition to regular briefings with the Local Member, to inform them of progress. The Local Member (Cllr Mark Kemp-Gee) fully supports the proposed works outlined in this report.
34. An existing communications plan ensures the dissemination of information to the community, residents and landowners where access is required. Public notices will also be displayed leading up to and during the works. The work includes advice to update the community Flood Action Plans.
35. An Equalities Impact Assessment has been undertaken, and the impact on the public and each Protected Characteristic is considered neutral. During construction it is anticipated that the scheme may cause disruption to residents, pedestrians and road users as access to playing fields, pavement and roads may be restricted. Works will be planned carefully to minimise any disruption caused.

### **Climate Change Impact Assessments**

36. Hampshire County Council utilises two decision-making tools to assess the carbon emissions and resilience of its projects and decisions. These tools provide a clear, robust, and transparent way of assessing how projects, policies and initiatives contribute towards the County Council's climate change targets of being carbon neutral and resilient to the impacts of a 2°C temperature rise by 2050. This process ensures that climate change considerations are built into everything the Authority does.

37. The Vulnerability Assessment indicated that the key Climate Variable is Heavy Rainfall and Surface Flooding. Potential vulnerability of the scheme - once completed - is the ability of key infrastructure to withstand the combined impact of surface water flooding, high levels of groundwater (surcharging) and precipitation that exceed the 2013/14 flood events.
38. The flood alleviation scheme's key objective is to reduce flood risk as the area is at risk of river or surface or groundwater flood events, and there are natural points in the landscape on the project site where water could amass during periods of heavy rainfall. Mitigation will focus on connecting up the disparate drainage systems to function passively to reduce the depth and duration of future flooding on the homes and highway. Once completed, it will enhance the ability of key infrastructure to withstand the combined impact of surface water flooding, high levels of groundwater (surcharging) and precipitation that are similar to the 2013/14 flood events. The intention is to balance the overall drainage network to ensure flows in upstream and downstream catchments are managed to reduce the risk of flooding. The overall effect will be to reduce the flood risk to homes and keep the highway open, which aligns with Strategic Outcome 2: People in Hampshire live safe, healthy and independent lives i.e., 'Contributing to keeping you safer'.

### **Carbon Mitigation**

39. Carbon emissions from this project arise from the use of materials for headwall construction e.g., concrete and steel, from plant and equipment required to undertake the work, and from stopped traffic or re-routing of traffic during operations which may require the closure of the A32. The carbon mitigation tool has identified there will be carbon emissions which are primarily linked with the installation of drainage pipes within the scheme area.
40. Carbon emissions will be mitigated by minimising the number of closures required through careful sequencing of construction operations, and by sourcing materials and plant locally wherever possible. These measures will be developed further with the appointed contractor.
41. The reduction of carbon emissions has been considered in the development of the scheme and plans for its delivery. If flooding were to occur again at the same level as historic events, there would be significant carbon emissions associated with the emergency response, the implementation of traffic diversions and the necessary recovery and clear-up operations following the flood event. Avoiding these environmental, social and financial costs aligns with the wider strategic priorities of Hampshire County Council which includes Strategic Outcome 2: People in Hampshire live safe, healthy and independent lives i.e. 'Contributing to keeping you safer'.

### **Statutory Procedures**

42. The works are considered permitted development under The Town and Country Planning (General Permitted Development) (England) Order 2015

as Hampshire County Council are the Highway Authority and the Lead Local Flood Authority (drainage body) as referred in Part 9 (Development relating to roads) and Part 13 (Water and sewerage). Ordinary Watercourse Land Drainage Consents and Environmental Permits will be obtained where necessary.

### **Land Requirements**

43. There are no land purchase requirements necessary to implement the scheme. However, the Contractor will need to access third party land to carry out works to reinstate/regrade land elevations to original lower levels. Section 100 of the Highways Act gives powers to the Council to carry out works on third party land for highway drainage purposes. It is anticipated where this applies, works will be undertaken using such powers, but consultations with the landowner will be carried out in advance of serving any notices.
44. Where works are required on third party land and Section 100 of the Highways Act does not apply, we will work with the landowner to arrange access and if required, make formal arrangements via a licence or easement.
45. Some land may be required to act as a temporary storage compound for works equipment, but there are a number of locations such as public car parks and lay-bys in the scheme area which can be utilised.

### **Maintenance Implications**

46. Some additional drainage assets will be provided consisting of approximately 320m of pipework and 12 gullies. Although these are additional features, they are standard and will be added to the existing maintenance strategy with minimal impact.
47. However, it is recognized that these are flood mitigation features so an additional 'inspection' would be recommended if the groundwater trigger level is reached.
48. Maintenance of the watercourse, where not classed as a highway asset, will be undertaken by riparian owners.
49. Once the works are complete, they will be added to the Flood Asset Register. This will ensure that the importance of the assets are recognized, that adequate maintenance is scheduled, and that more weight is given to any enforcement action that may be required in future.
50. The requirement for riparian owners to fulfil their duties in maintaining the ditches will be recommended for inclusion in a local flood action plan so that there is local scrutiny for these activities.



## **Policy Objectives**

### National

#### **National Flood and Coastal Erosion Risk Management Strategy for England (2020)**

This strategy's long-term vision is for: a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100.

It has 3 long-term ambitions, underpinned by evidence about future risk and investment needs. They are:

- climate resilient places: working with partners to bolster resilience to flooding and coastal change across the nation, both now and in the face of climate change
- today's growth and infrastructure resilient in tomorrow's climate: making the right investment and planning decisions to secure sustainable growth and environmental improvements, as well as infrastructure resilient to flooding and coastal change
- a nation ready to respond and adapt to flooding and coastal change: ensuring local people understand their risk to flooding and coastal change, and know their responsibilities and how to take action

The government's [Flood and Coastal Erosion Investment Plan](#) outlines how new flood and coastal schemes will better protect 336,000 properties by 2027, helping to avoid £32 billion in wider economic damages and reducing national flood risk by 11%.

### Local

#### **Hampshire County Council's Local Flood Risk Management Strategy (2020)**

From working with communities developing new flood action plans, to improving the management of our natural resources, the County Council's ambition is to be at the forefront of flood risk and water management creating a safer, more resilient Hampshire.

Our priority is to protect people, homes, businesses and key infrastructure by:

- avoiding risks and managing water resources through effective planning and design;
- preventing future flooding by reducing or removing existing risks;
- adapting to flood risk in order to minimise the impact and enable normal life to return as soon as possible;
- enabling communities to be better prepared to react to flood events and recover more easily; and
- adopting effective practices that are sustainable and affordable now and in the future.

**REQUIRED CORPORATE AND LEGAL INFORMATION:**

**Links to the Strategic Plan**

<b>Hampshire maintains strong and sustainable economic growth and prosperity:</b>	yes
<b>People in Hampshire live safe, healthy and independent lives:</b>	yes
<b>People in Hampshire enjoy a rich and diverse environment:</b>	yes
<b>People in Hampshire enjoy being part of strong, inclusive communities:</b>	yes

**Other Significant Links**

<b>Links to previous Member decisions:</b>	
<u>Title</u> Executive Member for Environment and Transport - Project Appraisal: A32 Farringdon Flood Alleviation Measures	<u>Date</u> 19/9/2017
<b>Direct links to specific legislation or Government Directives</b>	
<u>Title</u> Flood and Water Management Act Land Drainage Act	<u>Date</u> 2010 1991

**Section 100 D - Local Government Act 1972 - background documents**

**The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)**

<u>Document</u>	<u>Location</u>
A32 Farringdon Feasibility Report	Hantsfile ref doc number HF00001359125

## **EQUALITIES IMPACT ASSESSMENT:**

### **1. Equality Duty**

The County Council has a duty under Section 149 of the Equality Act 2010 ('the Act') to have due regard in the exercise of its functions to the need to:

- Eliminate discrimination, harassment and victimisation and any other conduct prohibited by or under the Act with regard to the protected characteristics as set out in section 4 of the Act (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation);
- Advance equality of opportunity between persons who share a relevant protected characteristic within section 149(7) of the Act (age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation) and those who do not share it;
- Foster good relations between persons who share a relevant protected characteristic within section 149(7) of the Act (see above) and persons who do not share it.

Due regard in this context involves having due regard in particular to:

- The need to remove or minimise disadvantages suffered by persons sharing a relevant protected characteristic that are connected to that characteristic;
- Take steps to meet the needs of persons sharing a relevant protected characteristic that are different from the needs of persons who do not share it;
- Encourage persons sharing a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

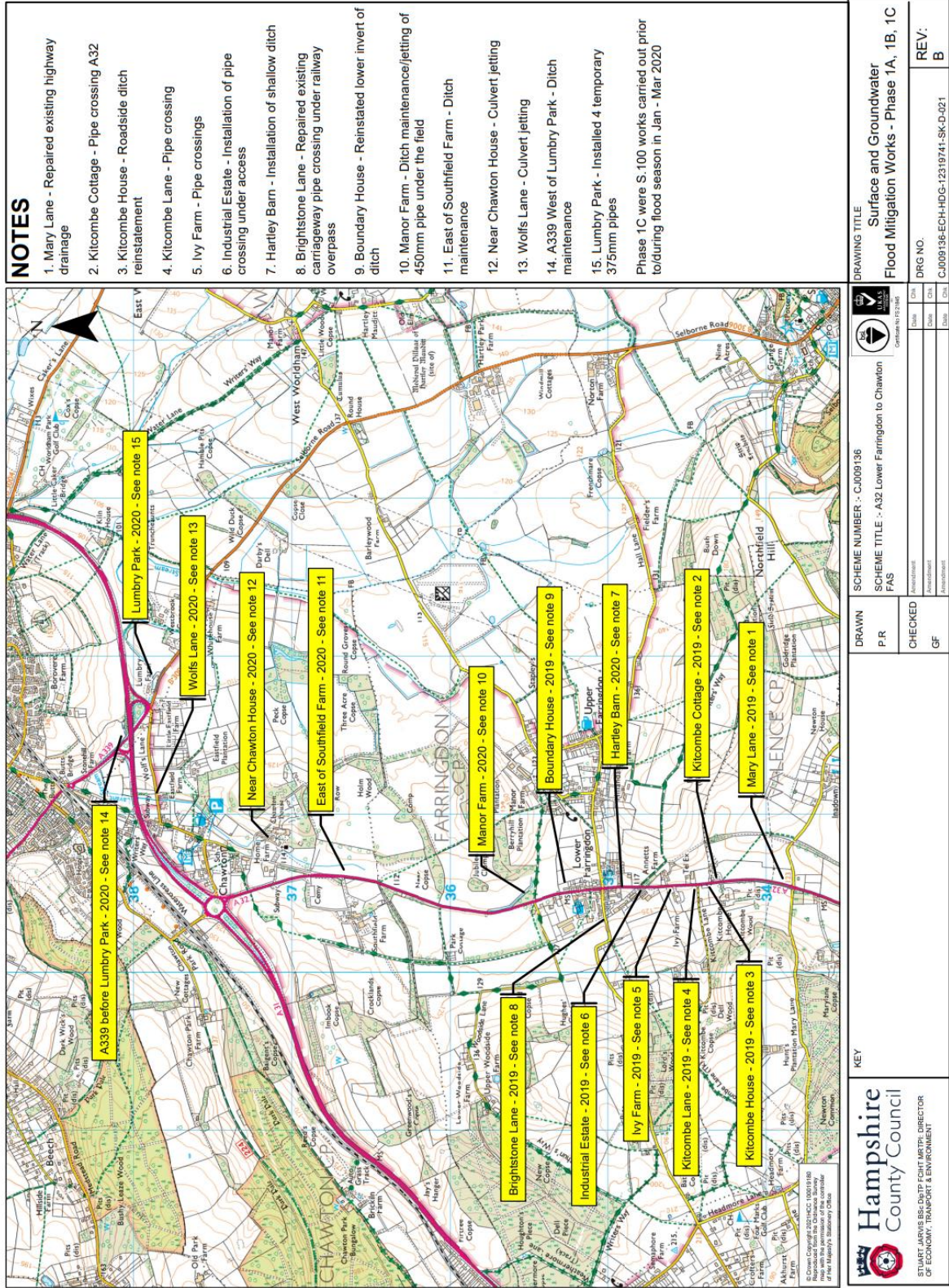
### **2. Equalities Impact Assessment**

The current proposals have been developed in collaboration with the Environment Agency, East Hampshire District Council, Thames Water, Farringdon Parish Council and Chawton Parish Council (Multi Agency Group or MAG).

The impact on the public and each Protected Characteristic is considered neutral.

During construction it is anticipated that the scheme may cause disruption to residents, pedestrians and road users as access to playing fields, pavement and roads may be restricted. Works will be planned carefully to minimise any disruption caused.

# Appendix A – General Arrangement – Location of completed Phase 1 works



## NOTES

1. Mary Lane - Repaired existing highway drainage
2. Kitcombe Cottage - Pipe crossing A32
3. Kitcombe House - Roadside ditch reinstatement
4. Kitcombe Lane - Pipe crossing
5. Ivy Farm - Pipe crossings
6. Industrial Estate - Installation of pipe crossing under access
7. Hartley Barn - Installation of shallow ditch
8. Brightstone Lane - Repaired existing carriageway pipe crossing under railway overpass
9. Boundary House - Reinstated lower invert of ditch
10. Manor Farm - Ditch maintenance/jetting of 450mm pipe under the field
11. East of Southfield Farm - Ditch maintenance
12. Near Chawton House - Culvert jetting
13. Wolfs Lane - Culvert jetting
14. A339 West of Lumby Park - Ditch maintenance
15. Lumby Park - Installed 4 temporary 375mm pipes

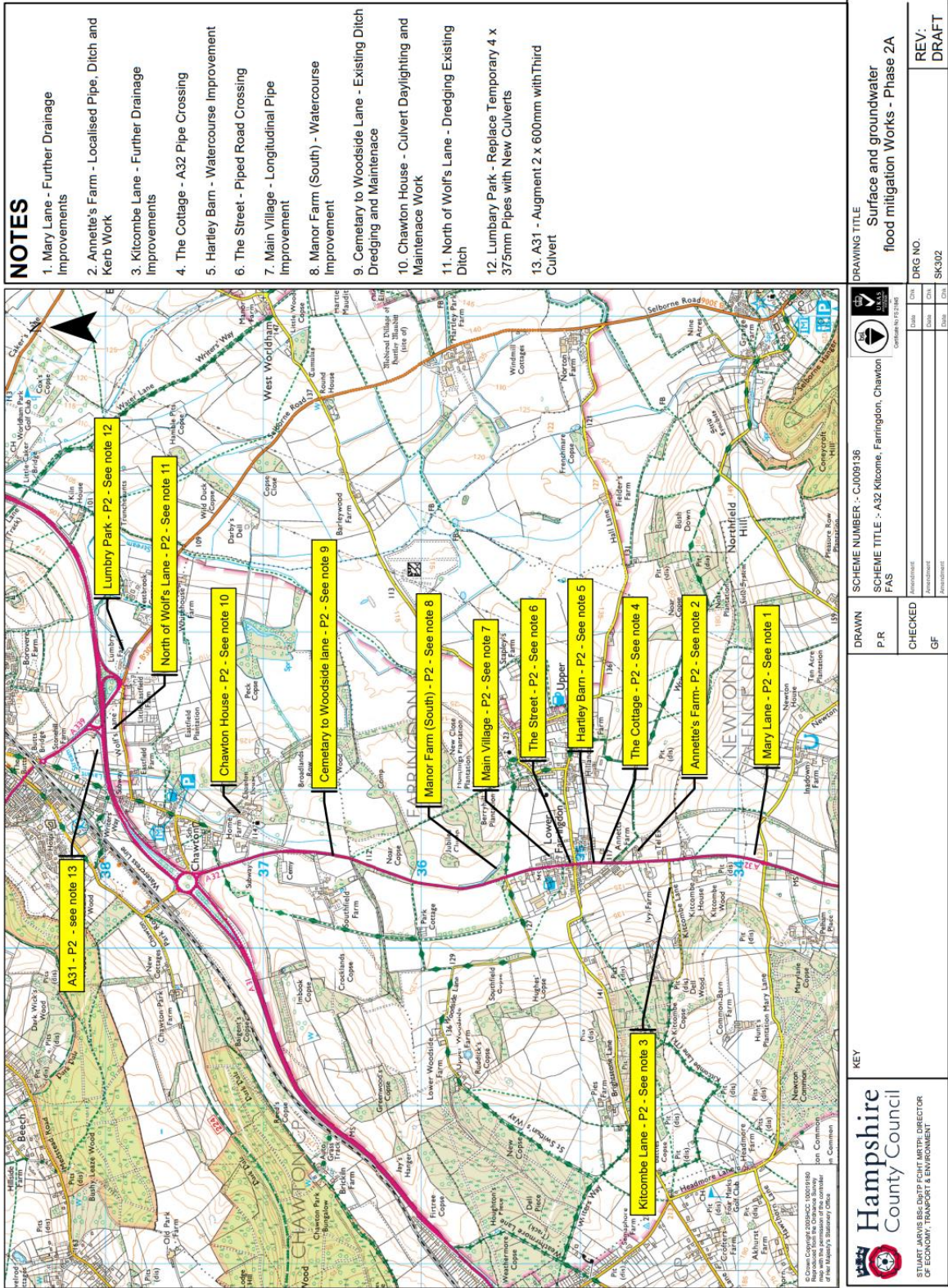
Phase 1C were S.100 works carried out prior to/during flood season in Jan - Mar 2020

DRAWING TITLE Surface and Groundwater Flood Mitigation Works - Phase 1A, 1B, 1C		DRAWING NO. CU009136-ECH-HDG-12319741-SK-D-021	
DRAWN P.R		CHECKED GF	
SCHEME NUMBER - CU009136 SCHEME TITLE - A32 Lower Farringdon to Chawton FAS		REV: B	
DATE	DATE	DATE	DATE

KEY

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# Appendix B – General Arrangement – Location of proposed Phase 2 works



- ### NOTES
1. Mary Lane - Further Drainage Improvements
  2. Annette's Farm - Localised Pipe, Ditch and Kerb Work
  3. Kitcombe Lane - Further Drainage Improvements
  4. The Cottage - A32 Pipe Crossing
  5. Hartley Barn - Watercourse Improvement
  6. The Street - Piped Road Crossing
  7. Main Village - Longitudinal Pipe Improvement
  8. Manor Farm (South) - Watercourse Improvement
  9. Cemetery to Woodside Lane - Existing Ditch Dredging and Maintenance
  10. Chawton House - Culvert Daylighting and Maintenance Work
  11. North of Wolf's Lane - Dredging Existing Ditch
  12. Lumby Park - Replace Temporary 4 x 375mm Pipes with New Culverts
  13. A31 - Augment 2 x 600mm with Third Culvert

DRAWING TITLE		Surface and groundwater flood mitigation Works - Phase 2A	
DRAWING NO.		SK302	
REV:		DRAFT	
DRAWN		P.R	
CHECKED		GF	
SCHEME NUMBER - C1009136		SCHEME TITLE - A32 Kitcome, Farrington, Chawton	
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