



Amberley Chalk Stream Report

26th February 2025

Alex Briggs, BSc, MSc.
Amberley Conservation Group

Accuracy of information and credentials of author

This report was prepared by Alex Briggs as part of the Amberley Conservation Group. Where possible, I have provided fully referenced sources for all information presented. While I am involved in this project as a private individual and local resident of Amberley, any opinions stated come from my experience as a wildlife conservationist, with 12 years of experience working for various nature recovery charities. I hold a Bachelor of Science in Animal Conservation from the University of Cumbria, and a Master of Science in Ecology, Evolution and Conservation from Imperial College London.

Contents

Accuracy of information and credentials of author	1
1. Summary and Context	2
2. The Amberley chalk stream: context and identification as Priority Habitat	3
3. Condition of the Amberley stream	6
4. Protections and designations	7
5. Wildlife habitat	9
6. Impact of Adjacent Development	10
7. Potential for Restoration and Conclusion	13
Reference List	16
Appendix A: Evidence of Chalk Stream Characteristics	19
Appendix B: Correspondence with the Western Sussex Rivers Trust	20

1. Summary and Context

The village of Amberley, (commonly referred to as the “Pearl of Sussex”), has long been an important site for nature, with Amberley Wildbrooks being one of the earliest designated sites in the UK. This report has been prepared in response to the South Downs National Park Authority (SDNPA) proposal (Policy SDXX, LAA reference HO037-038) for the development of 25-45 dwellings on the top and middle East Street Farm fields (see *Figure 1*), Amberley, West Sussex and in support of an alternative use of this land.

While there are other significant arguments against this proposal, particularly around access, the heritage character of the village and the proposed site being outside the development boundary, this report focuses on the issue of the chalk stream that runs across the site.

The Amberley Conservation Group was set up to argue that this site is unsuitable for development, particularly due to the importance of the chalk stream. In my view this site has significant potential as a wildlife habitat I am aware residents would like to see the stream and site restored as a nature reserve and community space in the heart of the village.



Figure 1: The Top and Middle fields identified in the South Downs National Park Authority proposal (Policy SDXX, LAA reference HO037-038) for the development of 25-45 dwellings on the top and middle fields of East Street Farm, Amberley.

2. The Amberley chalk stream: context and identification as Priority Habitat

The stream in Amberley flows out of the ground from a culvert (presumably originating from a chalk aquifer south of the B2139 in Pip Pen Farm (private land), before running westwards, across East Street Farm (the site of proposed development). Along its length it passes through multiple culverts, as it passes through the village of Amberley, before eventually joining the River Arun. The stream has been artificially split, with an additional southern leg added 2014-2015 to increase the water storage capacity following issues with flooding as part of West Sussex County Council’s Operation Watershed (see *Figure 2*; West Sussex County Council, 2024). We have found maps that identify the stream following this route since at least 1876 (see *Figure 3*; Ordnance Survey, 1879).



Figure 2: The route of the chalk stream in the village of Amberley, running from east to west. From its earliest identified point, the stream runs across the site of proposed development at East Street Farm, passing through multiple culverts through the village.

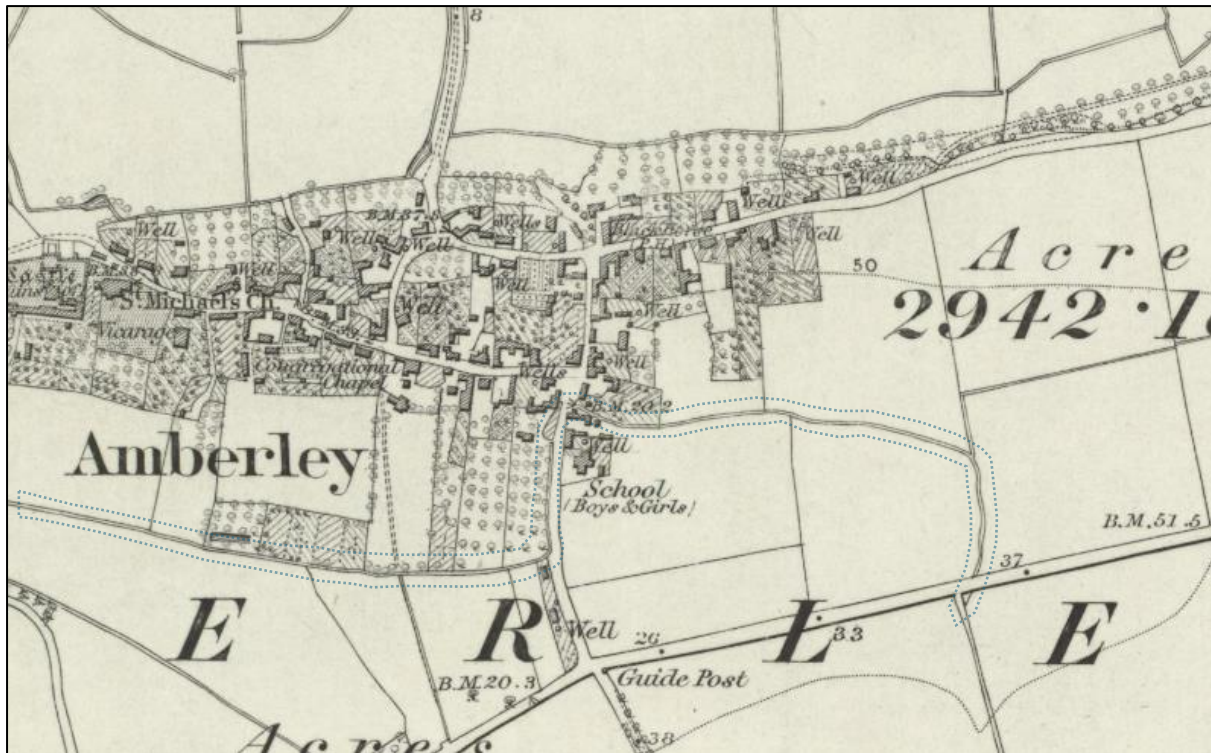


Figure 3: historic mapping dating from 1876, showing the relatively unchanged course of the stream (highlighted) through the village of Amberley (Ordnance Survey, 1879).

The stream is in a degraded state and is widely regarded in the local community as a ditch, with the primary purpose of drainage for the village. However, it does exhibit multiple characteristics of a chalk stream, being fed from a groundwater chalk aquifer, with clear, mineral rich water (see Figure 4). Data collected by the Amberley Conservation Group shows the mean pH of the stream as 7.9, obtained by testing on 8th March 2025 at four points along the stream (see Appendix A, Table 1 and Figure 11). At each sampling location, pH was tested three times using a digital Apera PH20 pH Tester (± 0.1 accuracy; Apera Instruments, 2025), and an average taken. The flow regime is “winterbourne” having a seasonal flow regime (see Appendix A, Table 2) that dries up in the Summer, characteristic of the headwaters of a chalk stream (Joint Nature Conservation Committee, 2011, p.5).



Figure 4: the Amberley stream with typically clear water and a gravel dominated bed, characteristics of a chalk stream.

Table 1: results of pH testing on the Amberley stream, using a digital Apera PH20 pH Tester (± 0.1 accuracy; Apera Instruments, 2025).

Sample Location	pH result
1	7.7
2	7.2*
3	8.0
4	8.0

*Samples at this location were taken underneath *Leylandii* trees, leaf drop from which may have had a slight acidifying effect on the stream.

A report from the World Wildlife Fund in 2014, highlighting the failing state of chalk streams in the UK, describes multiple ways of defining a chalk stream. The report suggest that they are “broadly defined as one that derives most of its flow from chalk-fed groundwater, and it exhibits – in varying degrees depending on the particular geology of a given valley – the ‘classic’ chalk stream characteristics of alkaline, crystal-clear water, flowing consistently and equably over clean gravel beds” (World Wildlife Fund UK, 2014, p.13).

Natural England mapping showing the location of “Priority Habitat Chalk Rivers and Streams”, identifies a section of the stream 150m East of the site of proposed development (Natural England 2023; see *Figure 5*).

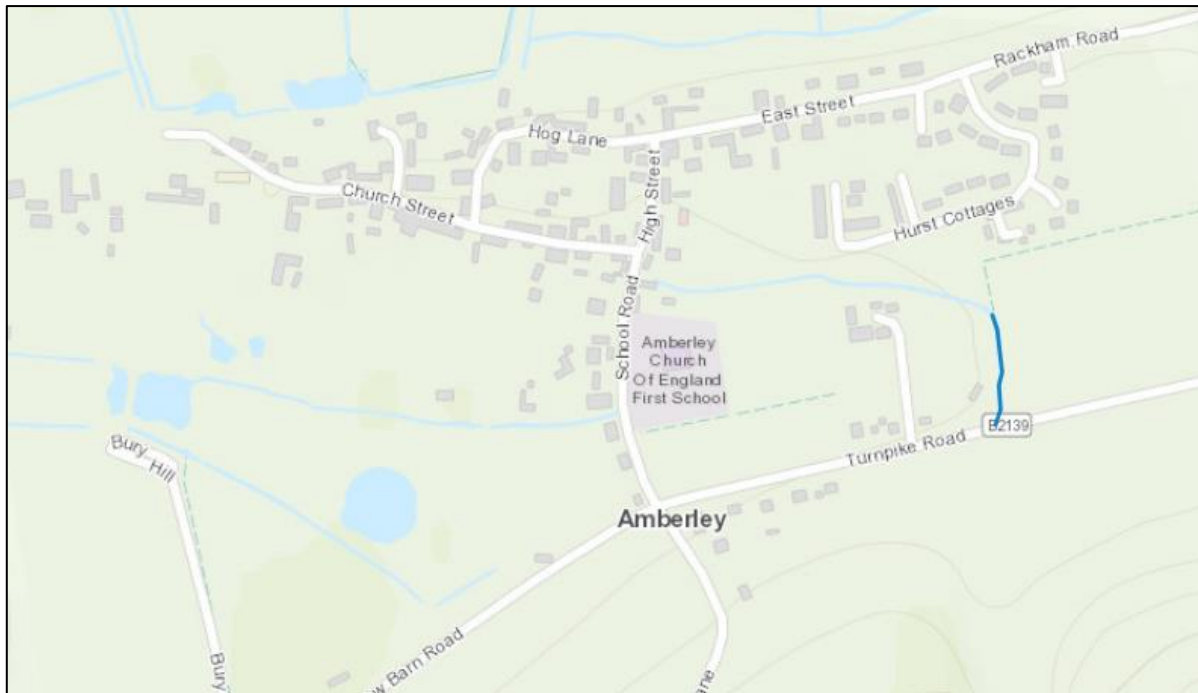


Figure 5: The stream in Amberley identified as Priority Habitat Chalk Stream (Natural England, 2023).

While this map does not identify the full stream as Priority Habitat, the status of the full length of the stream as a chalk stream was confirmed in correspondence from Sarah Hughes, Chalk Stream Resilience Officer for the Western Sussex Rivers Trust on 19th February 2025 who has passed this information on to the central Rivers Trust suggesting that this be highlighted to Natural England to update the above mapping (Hughes, 2025; see *Appendix B*).

3. Condition of the Amberley stream

While the stream is an important habitat, it is in a degraded state. Along the majority of its length, it has been historically straightened and cleared to improve drainage. However, the lack of ephemeral wet areas has caused flooding issues in recent years, meaning that there has been intensive management of vegetation to manage the flood risk. Leylandii trees have, until recently, grown along much of its length, shading out native vegetation. The Amberley Conservation Group tested water quality, using testing strips to test for phosphates (Simplex Health, 2025a), nitrates and nitrites (Simplex Health, 2025b) at six locations along the stream. Results for all three indicators of water quality were 0ppm for each test, although these test strips have limited accuracy. These results indicate that, despite the degraded nature of the stream, the water quality is good and not significantly effected by agricultural run off or other pollutants, demonstrating the potential for restoration.

It is worth noting that, while the Amberley stream is in a degraded state, this should not diminish the importance of the chalk stream. This is not atypical for priority habitat chalk streams in the UK. Over 75% of the chalk streams have been “significantly modified from their natural state”, this being a major factor leading to 77% of assessed chalk streams being considered as “failing” and not meeting the statutory requirements for “good” status (World Wildlife Fund UK, 2014, p.32). The Amberley Conservation Group has engaged a third-party ecologist to conduct a formal River Condition Assessment (RCA) which, if completed in time, will be submitted separately to this report as part of Amberley Conservation Group’s response to this consultation.

4. Protections and designations

The importance of chalk streams

“England is home to 85% of all chalk streams and restoring these internationally important habitats is a government priority” (Defra, 2023). The 2004 Environment Agency report, “the State of England’s Chalk Rivers” was the first comprehensive assessment of the health of chalk rivers in the UK and set out the following vision: “Chalk rivers should be protected or restored to a quality which sustains the high conservation value of their wildlife, healthy water supplies, recreation opportunities and their place in the character and cultural history of the landscape” (UK Biodiversity Action Plan: Steering Group for Chalk Rivers, 2004).

Current protections

Chalk streams were originally designated as Priority Habitats, under the UK Biodiversity Action Plan (Joint Nature Conservation Committee, 2011). This has since been superseded several times, most recently by the UK’s National Biodiversity Strategy and Action Plan, 2024. However, while the UK Biodiversity Action Plan is no longer current, the original list of priority habitats remains the basis for current strategy documents (Joint Nature Conservation Committee, 2024).

A report from the World Wildlife Fund in 2014 identified and assessed 224 chalk streams, highlighted that only 11 streams have any protection through designation as Special Areas of Conservation (SACs, international importance) or Sites of Special Scientific Interest (SSIs, national importance) (World Wildlife Fund UK, 2014). There are currently no other legal protections specific to chalk streams. The CaBA Chalk Stream Restoration Strategy 2021 Implementation Plan 2022 sets out recommendations to tackle the failing condition of many chalk streams and highlights the particular need for legislation specific to these habitats (Catchment Based Approach, 2022).

In September 2023, changes were brought to the Levelling up and Regeneration Bill, with an amendment which added chalk streams into the definitions of environmental protection and natural environment (Defra, 2023). However practically this may add little to the protections for chalk streams. There are an increasing number of calls for increased protections for chalk streams (The Rivers Trust, 2020).

Pending legislation

In response to the recommendations of the CaBA Chalk Stream Restoration Strategy, Defra announced a “Chalk Stream Recovery Pack” in 2023. However, there has recently been outcry from multiple organisations following DEFRA’s decision to shelve this Pack that has recently made headlines with a petition letter organised by the Hampshire & Isle of Wight Wildlife Trust (BBC News, 2025; Hampshire and Isle of Wight Wildlife Trust, 2024).

There is currently a Chalk Streams (Protection) Bill in Second Reading in the House of Commons. This would “Provide for a category of protection for chalk streams for the purpose of providing additional protections from pollution, abstraction and other forms of environmental damage; and for connected purposes” (House of Commons, 2025).

Other relevant legislation

The Water Environment (Water Framework Directive) (England and Wales) Regulations (2017) does not specifically refer to chalk streams but sets out environmental best practices for surface water.

Policies of the South Downs National Park

Due to the limited protections for chalk streams, our current hope is that developing on the chalk stream, further degrading it beyond reasonable hope of recovery, would contradict the Purposes and Duty of the South Downs National Park Authority (South Downs National Park Authority, 2025a). We have an internationally rare chalk stream within a National Park and hope to convince the Park of both the current ecological value of this habitat, and the “hope value” of restoring the stream.

The protection of streams is specifically addressed within the South Downs National Park local plan. *Strategic Policy SD17: Protection of the Water Environment* states “Development proposals that affect groundwater, surface water features, and watercourse corridors will not be permitted unless they conserve and enhance” biodiversity and other key features (South Downs National Park Authority, 2019, p.77).

The importance of chalk streams is widely recognised and may demonstrate that the proposed development of East Street Farm would conflict with the statutory purposes of the National Park, in which case the Sandford Principle states that any relevant authority “shall attach greater weight to the purpose of conserving and enhancing the natural beauty, wildlife and cultural heritage of the area comprised in the National Park” (Environment Act, 1995).

5. Wildlife habitat

The majority of emphasis of this report is on the habitat of the chalk stream instead of the wildlife present. As far as we are aware there are no designated species present on the site which would impact development. However, it is worth noting the particular value of Amberley as a heritage village, which in itself provides habitat for a variety of species (partially thanks to the dark skies reserve and high tranquillity score) and which would undoubtedly be affected by development in the village. These species (all of which have been recorded within or adjacent to the development site) are:

- Serotine bats (*Eptesicus serotinus*)
- Soprano pipistrelle bats (*Pipistrellus pygmaeus*)
- Common pipistrelle bats (*Pipistrellus pipistrellus*)
- Yellow necked mice (*Apodemus flavicollis*)
- European hedgehogs (*Erinaceus europaeus*)

Additionally, Sarah Hughes (Chalk Stream Resilience Officer, Western Sussex Rivers Trust) has conducted a desk search and collated a list from the National Biodiversity Network of species present around the site:

- Water voles (*Arvicola amphibius*) - within 2km of the site [Water voles: advice for making planning decisions - GOV.UK](#)
- Within 5Km of the site you have:
 1. Otter (*Lutra lutra*) – [Otters: advice for making planning decisions - GOV.UK](#)
 2. Hazel Dormouse (*Muscardinus avellanarius*) - [Hazel dormice: advice for making planning decisions - GOV.UK](#)
 3. Daubenton's Bat (*Myotis daubentonii*) - [Bats: advice for making planning decisions - GOV.UK](#)
 4. Natterer's Bat (*Myotis nattereri*)
 5. Soprano Pipistrelle (*Pipistrellus pygmaeus*)
 6. Common Pipistrelle (*Pipistrellus pipistrellus*)
 7. Serotine (*Eptesicus serotinus*)
 8. Noctule (*Nyctalus noctule*)
 9. Brown Long-eared Bat (*Plecotus auritus*)
 10. Barbastelle (*Barbastella barbastellus*) – [Annex II species linked to the Singleton & Cocking Tunnels SAC](#)
 11. Brandt's Bat (*Myotis brandtii*)
 12. Whiskered Bat (*Myotis mystacinus*)
 13. Nathusius's Pipistrelle (*Pipistrellus nathusii*)

(Hughes, 2025)

6. Impact of Adjacent Development

Similar to the limited legal protections for chalk streams, there is no specific legislation on how development should be sustainably achieved around these habitats. However, the impacts of development and intensive human activity close to water courses are well documented. Water run-off from any buildings and hard surfaces would dilute and harm the water quality. The chalk stream would need to be protected from pollutant harm. Housing pollutants such as, garden fertilizers, glyphosate weedkillers, systemic pesticides like neonicotinoids used as tick and flea treatments for pets and strong detergents used for cleaning cars would all be particularly harmful if they entered a watercourse.

The CaBA Chalk Stream Restoration Strategy 2021 Implementation Plan 2022 highlights the potential for sediment pollution from roads, and the need for a strategy with development close to chalk streams (Catchment Based Approach, 2022). The open letter sent by the Hampshire and Isle of Wight Wildlife Trust also makes recommendations, most relevant of these is the introduction of a “50-100 metre ‘no development’ buffer zone along the riparian corridor” as recommended by Natural England’s recommendations for vulnerable habitats (Hampshire and Isle of Wight Wildlife Trust, 2024; Natural England 2020). We have overlaid a buffer onto the Amberley chalk stream to highlight how much of East Street Farm this highlights as unsuitable for development under recommendation from Natural England (see Figure 6).



Figure 6: A 50m buffer placed on either side of the chalk stream in Amberley, to highlight how much of East Street Farm is unsuitable for development under the recommendations of Natural England (Hampshire and Isle of Wight Wildlife Trust, 2024; Natural England, 2020).

Since February 2024, all developments (with the exception of nationally significant infrastructure projects) are subject to Biodiversity Net Gain (Defra, 2024). The extremely high distinctiveness scores of chalk stream habitat assigned through the Biodiversity Net Gain metric means that bespoke compensations will be likely required for impacts or losses on development sites (Catchment Based Approach, 2022).

Flooding in Amberley

Flooding from the stream has been a persistent problem in Amberley, particularly with the stream affecting School Road and adjacent properties. This is partly due to the geology of the site. Underlying the thin deposit of topsoil on these three fields is a layer of Malmstone, which is a pale grey, lime cemented siltstone used in most of the old walls and buildings in the Conservation Area (Birch and Cordiner, 2014, p.1). It is a seam of rock about 80m thick that dips south from the village towards the B2139 and then onwards under the Downs. It is known as the Malmstone bench. The stone does not have the porosity of chalk and is the very reason that chalk streams appear at the foot of the chalk Downs (Joseph, 2025). The impervious nature of the underlying dip slope bedrock means that these fields are usually waterlogged in winter, especially with additional water run-off associated with the Hurst Cottages development to the north of the site and are prone to flash flooding (Joseph, 2025).

Flash flooding in 2013-2014 was compounded by the new development of houses at Newlands Gardens. It led to the flooding and failure of the sewage pumping station. Raw sewage flooded houses by backflowing through toilets and contaminated the flood water outside of the Primary School where manhole covers had been hydraulically lifted off. Contaminated water flowed and was pumped into the chalk stream (Joseph, 2025).

The flooding in 2013-2014 led to the addition of an additional southern leg of the stream to increase water storage capacity (West Sussex County Council 2024; Sussex World, 2014; see *Figure 7*). The stream is currently intensively managed to clear vegetation and speed up runoff, particularly to the East of the site around the new developments at Newland Gardens and Swan Meadows, while many of the listed properties to the West are at the same level or lower than East Street Farm. The fields themselves are highly waterlogged through the winter, and with climate change increasing the likelihood of severe and extreme rainfall and flooding events it is unlikely that any development will be able to mitigate, let alone reduce, flooding on this site, nor prevent contaminated water draining from the new development into the stream (BBC News, 2024; see *Figure 8*).



Figure 7: Flooding in Amberley village from the stream, affecting School Road in 2013-2014 (Image credit: Sandra Conlon).



Figure 8: The Middle Field (HO038) in February 2025, part of the East Street Farm proposed development area, which becomes waterlogged in winter (Image credit: Sandra Conlon, 2025).

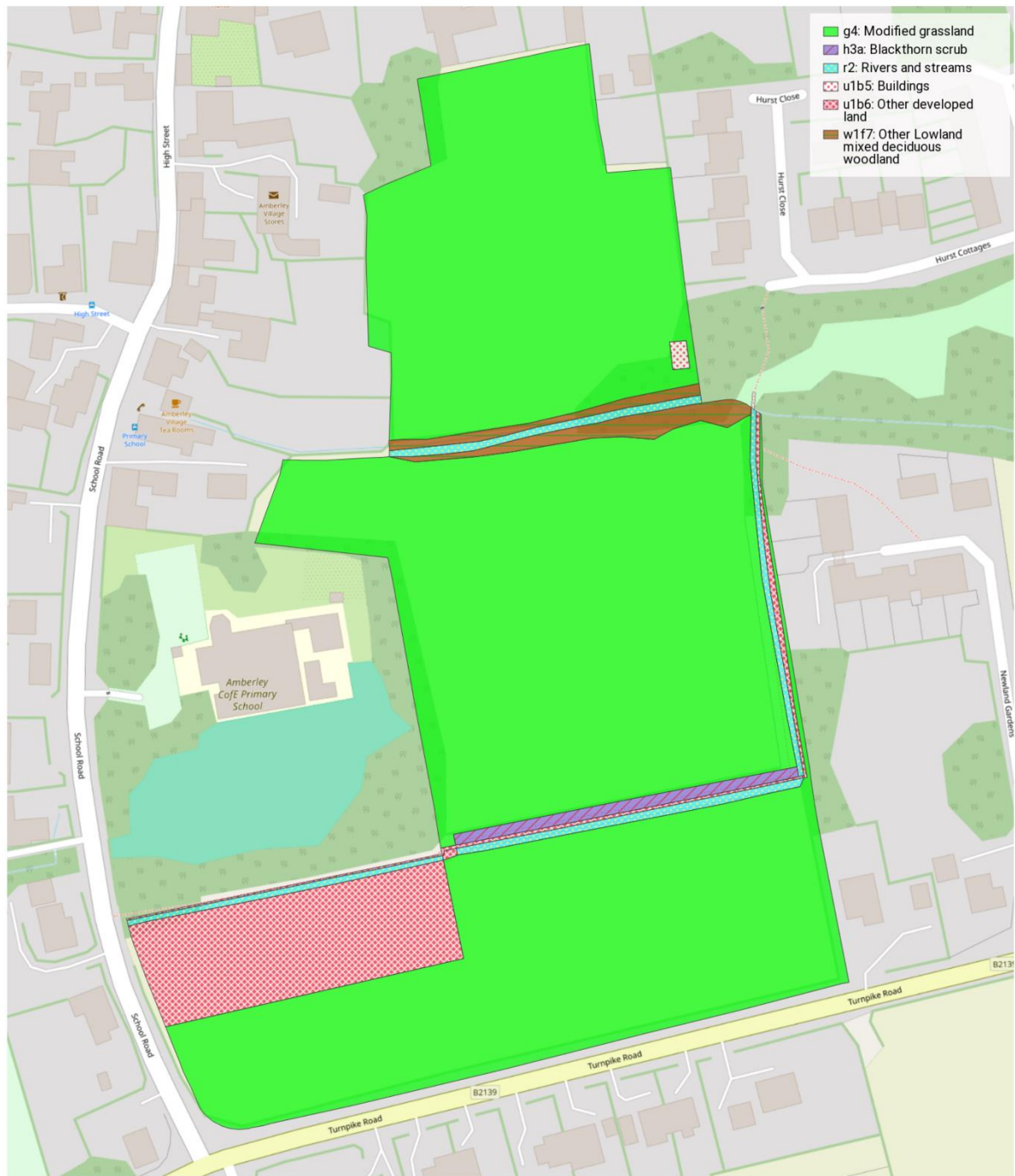
7. Potential for Restoration and Conclusion

The key argument of the Amberley Conservation Group is that restoring (or enabling Amberley community to restore) the chalk stream would better fulfil the Purposes of the South Downs National Park Authority while supporting its ReNature goal to increase the amount of land managed for nature from 25% to 33% by 2030 (South Downs National Park Authority, 2024 (South Downs National Park Authority, 2025a; 2025b)). Not only would restoring the stream support nature recovery, it would also be used to reduce flood risk through Natural Flood Management. See similar case studies:

- [Goldrill Beck in the Lake District](#)
- [Cockshute stream in Lewes, East Sussex](#)

It is interesting to note that re-meandering the stream has been recommended to landowners adjacent to East Street Farm by myself, the Sussex Wildlife Trust and South Downs National Park Authority Rangers. Ryan Ellis (BSc, MSc, Director of RTA Restoration) has used LandApp to create a habitat map for the site as it is currently (see *Figure 9*), and to draw up a vision of what it could look like with following the restoration and re-meandering of the chalk stream (see *Figure 10*).

The Old Piggery, Baseline



Produced on Land App, Jan 12, 2025.
© Crown copyright and database right 2025 (licence number 100059532)



50 m
Scale 1:1394 (at A4)



Figure 9: East Street Farm habitat map, February 2025.

The Old Piggery, Proposed Nature Reserve



Produced on Land App, Jan 12, 2025.
© Crown copyright and database right 2025 (licence number 100059532)



50 m
Scale 1:1394 (at A4)



Figure 10: East Street Farm habitat map following an envisioned chalk stream restoration project and the establishment of a community nature reserve.

Reference List

Apera Instruments (2025) *Apera Instruments Value Series PH20 Pocket pH Tester pH Meter Kit*. Available at: <https://aperainst.com/ph20-value-ph-meter-pocket-digital-tester-pen-kit-apera-instruments> (Accessed 9th March 2025).

BBC News (2025) *Protest over 'shelved' chalk stream recovery plan*. Published 18th February. Available at: <https://www.bbc.co.uk/news/articles/c70q00g922do> (Accessed: 26th February 2025).

BBC News (2024) *How climate change worsens heatwaves, droughts, wildfires and floods*. Published 14th November. Available at: <https://www.bbc.co.uk/news/science-environment-58073295> (Accessed: 9th March 2025).

Birch, R. and Cordiner, R. (2014) *Building Stones of West Sussex*. Worthing: The Geological Society.

Catchment Based Approach (2022) *Chalk Stream Restoration Strategy 2021 Implementation Plan 2022*. Available at: <https://catchmentbasedapproach.org/wp-content/uploads/2022/11/CaBA-CSR-IMP-PLAN-FINAL-25.11.22.-V2.pdf> (Accessed: 26th February 2025).

Defra (2024) *Biodiversity net gain*. Available at: <https://www.gov.uk/government/collections/biodiversity-net-gain> (Accessed: 26th February 2025).

Defra (2023) *Changes announced to better protect England's chalk streams*. Available at: <https://deframedia.blog.gov.uk/2023/09/21/changes-announced-to-better-protect-englands-chalk-streams/> (Accessed: 26th February 2025).

Environment Act 1995, Part III, National Parks. Available at: <https://www.legislation.gov.uk/ukpga/1995/25/data.xht?view=snippet&wrap=true> (Accessed: 26th February 2025).

UK Biodiversity Action Plan: Steering Group for Chalk Rivers (2004) *The State of England's Chalk Rivers: A Report*. Great Britain: Environment Agency

Hampshire and Isle of Wight Wildlife Trust (2024) *Open letter to Deputy Prime Minister and Secretary of State for Housing, Communities and Local Government*. Published 13 November 2024. Available at: <https://www.norfolkwildlifetrust.org.uk/sites/default/files/2024-11/Chalk%20streams%20open%20letter%202024.pdf> (Accessed: 26th February 2025).

House of Commons (2025) *Chalk Streams (Protection) Bill. Bill 66 58/4*. Available at: <https://bills.parliament.uk/bills/3588> (Accessed: 26th February 2025).

Hughes, S. (2025) Email to Alexander Briggs, 19th February

Joint Nature Conservation Committee (2024) *UK BAP Priority Habitats*. Available at: <https://jncc.gov.uk/our-work/uk-bap-priority-habitats/> (Accessed: 26th February 2025).

Joint Nature Conservation Committee (2011) *UK Biodiversity Action Plan: Priority Habitat Descriptions (Rivers & Streams)*. Available at: <https://data.jncc.gov.uk/data/01d6ab5b-6805-4c4c-8d84-16bfebe95d31/UKBAP-BAPHabitats-45-Rivers-2011.pdf> (Accessed: 26th February 2025).

Joseph, G. (2025) Email to Alex Briggs, 3rd March.

National Biodiversity Network (2025) *Explore Your Area*. Available at: <https://records.nbnatlas.org/explore/your-area#50.9063|-0.5338|13|Mammals> (Accessed: 26th February 2025).

Natural England (2023) *Chalk Rivers (England)*. Available at: <https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::chalk-rivers-england/about> (Accessed: 26th February 2025).

Natural England (2020) *Nature Networks Evidence Handbook (NERR081)*. Available at: <https://publications.naturalengland.org.uk/publication/6105140258144256> (Accessed: 26th February 2025).

Ordnance Survey (1879) *OS Six-inch England and Wales, 1842-1952. Sussex Sheet L. Surveyed: 1875 to 1876, Published: 1879*. Available at: <https://maps.nls.uk/view/102347689> (Accessed: 26th February 2025).

The Rivers Trust (2020) *Charles Rangeley-Wilson: 'It's high time we put Chalk-Streams First'*. Available at: <https://theriverstrust.org/about-us/news/charles-rangeley-wilson-its-high-time-we-put-chalk-streams-first> (Accessed: 26th February 2025).

Simplex Health (2025a) *Phosphate Test Strips 0-100ppm (50 Strips)*. Available at: <https://www.simplexhealth.co.uk/product/phosphate-test-strips-0-100ppm-50-strips/> (Accessed: 9th March 2025).

Simplex Health (2025b) *Nitrate 0-500 & Nitrite 0-25 Tests (100 strips)*. Available at: <https://www.simplexhealth.co.uk/product/nitrate-0-500-nitrite-0-25-tests-100-strips/> (Accessed: 9th March 2025).

South Downs National Park Authority (2025a) *Purposes & Duty*. Available at: <https://www.southdowns.gov.uk/national-park-authority/our-work/about/purposes-duty/> (Accessed: 26th February 2025).

South Downs National Park Authority (2025b) *Why do we need to ReNature the South Downs?*. Available at: <https://www.southdowns.gov.uk/renature/why-do-we-need-to-renature-the-south-downs/> (Accessed: 9th March 2025).

South Downs National Park Authority (2019) *South Downs Local Plan*. Available at: https://www.southdowns.gov.uk/wp-content/uploads/2019/07/SD_LocalPlan_2019_17Wb.pdf (Accessed: 26th February 2025).

Sussex World (2014) *Floods cause misery for Amberley neighbours*. Available at: <https://www.sussexexpress.co.uk/arts-and-culture/video-floods-cause-misery-for-amberley-neighbours-1286297> (Accessed: 26th February 2025).

The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, Available at: <https://www.legislation.gov.uk/uksi/2017/407/data.xht?view=snippet&wrap=true> (Accessed: 26th February 2025).

West Sussex County Council (2024) *Operation Watershed*. Available at: <https://www.westsussex.gov.uk/leisure-recreation-and-community/supporting-local-communities/operation-watershed/> (Accessed: 9th March 2025).

World Wildlife Fund UK (2014) The State of England's Chalk Streams. Available at:
https://assets.wwf.org.uk/downloads/wwf_chalkstreamreport_final_lr.pdf (Accessed: 26th
February 2025).

Appendix A: Evidence of Chalk Stream Characteristics

Table 1: results of pH testing on the Amberley stream, using a digital Apera PH20 pH Tester (± 0.1 accuracy; Apera Instruments, 2025).

Sampling Location	pH result
1	7.7
2	7.2*
3	8.0
4	8.0

*Samples at this location were taken underneath *Leylandii* trees, leaf drop from which may have had a slight acidifying effect on the stream.



Figure 11: Map of four sampling locations used to collect data on the pH of the Amberley Stream using a digital Apera PH20 pH Tester (± 0.1 accuracy; Apera Instruments, 2025).

Table 2: Data on the first and last day of flow of the Amberley stream annually, demonstrating the winterbourne flow regime. Dataset us from 1995-2006 and was collected by the residents of Stream Barn and provided by Sandra Conlon (Amberley resident).

Stream starts	Stream stops
22/12/1995	28/04/1996
22/11/1996	25/04/1997
09/11/1997	07/07/1998
24/10/1998	01/06/1999
11/12/1999	10/08/2000
20/09/2000	03/07/2001
07/10/2001	03/10/2002
26/10/2002	29/05/2003
22/11/2003	30/06/2004
23/10/2004	09/04/2005
06/11/2005	28/06/2006

Appendix B: Correspondence with the Western Sussex Rivers Trust

Subject: RE: Chalk stream at Amberley

Good morning Alex & Catherine,

Thank you for the below (& attached), which is much appreciated.

The Natural England map confirms the present of chalk streams at the site, but sadly they have missed marking the rest of the watercourse as chalk river, which is always frustrating. I will pass details on to the central Rivers Trust in a hope that they can mark this as a chalk watercourse, which will eventually feed into the data at Natural England (but this can take some time).

It would be great to get involved, however I am mindful on how busy the team is, and I will need to wait for our CEO to return from leave, which will be 24 February.

It would be good to see if you have any [Water crowfoot *Ranunculus aquatilis*](#) which is the top plant for chalk streams.

I have checked on the [National Biodiversity Network](#) (which takes a while to load) and you have the following:

Water voles *Arvicola amphibius* - within 2km of the site [Water voles: advice for making planning decisions - GOV.UK](#)

Within 5Km of the site you have:

1. Otter *Lutra lutra* – [Otters: advice for making planning decisions - GOV.UK](#)
2. Hazel Dormouse *Muscardinus avellanarius* - [Hazel dormice: advice for making planning decisions - GOV.UK](#)
3. Daubenton's Bat *Myotis daubentoniid* - [Bats: advice for making planning decisions - GOV.UK](#)
4. Natterer's Bat *Myotis nattereri*
5. Soprano Pipistrelle *Pipistrellus pygmaeus*
6. Common Pipistrelle *Pipistrellus pipistrellus*
7. Serotine *Eptesicus serotinus*
8. Noctule *Nyctalus noctula*
9. Brown Long-eared Bat *Plecotus auritus*
10. Barbastelle *Barbastella barbastellus* – [Annex II species linked to the Singleton & Cocking Tunnels SAC](#)
11. Brandt's Bat *Myotis brandtii*
12. Whiskered Bat *Myotis mystacinus*
13. Nathusius's Pipistrelle *Pipistrellus nathusii*

The below might be helpful too.

[Charles Rangeley-Wilson: 'It's high time we put...' | The Rivers Trust](#)
[Chalk rivers - Buglife](#)
[Chalk rivers | The Wildlife Trusts](#)
[Water crowfoot, or how we learned to love Ranunculus – Creating a better place](#)

Many thanks for your time on this.

Kind regards

Sarah

Sarah Hughes
 Chalk Stream Resilience Officer
 (Ems & Hambrook)

My working days are Mon – Thurs

Arun and Rother Rivers Trust trading as the Western Sussex Rivers Trust



(Hughes, 2025)