OBLEC
OLD BASING & LYCHPIT
ENVIRONMENT CAMPAIGN

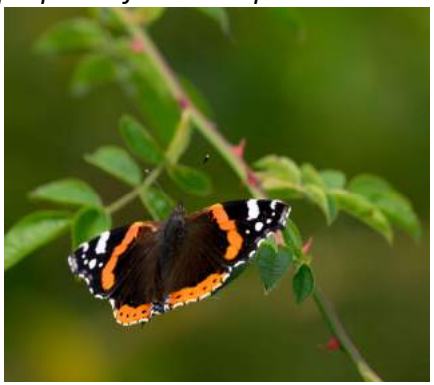
Potential impact on protected & endangered wildlife from proposed development and capacity of infrastructure to process sewage from it

Interim report, with executive summary: September 2023 (1.4)

Select 'geotagged' pictures of range of wildlife, most endangered, taken on sites proposed for development

Redstart: 'Amber conservation list'
(Credit: Alan Johnston)

Buzzard: 'Amber conservation list'
(Credit: Alan Johnston)



Small tortoise butterfly
(Credit: Alan Johnston)

Slow worm – Endangered, Section 41
(Credit: G Maude)

EXCECUTIVE SUMMARY

Background

- Basingstoke and Deane and Borough Council is considering draft proposals to develop 1,500 houses on greenfield sites on 'Land East of Basingstoke'. Draft plans have been communicated to the Economic, Planning and Housing Committee (https://tinyurl.com/3vh87ndb). Plans are summarised in Figure A below.

Objective of this report:

- Provide initial estimates of potential impact on protected and endangered wildlife from proposed development.
- Provide an updated assessment of capacity of Basingstoke's sewage infrastructure to reliably process waste from additional housing.
- Help stakeholders assess the validity of communications regarding development and assumptions underlying it.

How this report was generated:

- OBLEC established a working group of volunteers. They include ecologists, biologists, listers, academics and nature photographers.
- The group secured official records of wildlife present on the greenfield sites via data from the Hampshire Biodiversity Information Centre.
- They also launched a 'Citizen scientist' survey to provide additional, contemporary data on wildlife supported by the sites. An interim analysis of ~70 submissions made has been completed. Geotagged images were also sought of wildlife on the sites.
- Data on the performance of Basingstoke's sewage infrastructure between 2018 and 2022 was secured from the River Trust. It was used to assess the infrastructure's ability to manage additional housing.

Interim headline findings from report:

- Both HBIC and interim citizen scientist data shows legally protected and endangered species are present across the sites proposed for development. Over 20 different endangered or species with high legal protection were seen at the sites, typically on multiple occasions. They include, bats, reptiles, birds and other mammals.
- Geotagged images evidenced endangered and protected wildlife on the sites (examples of range are shown on the front page).
- River Trust evidence shows the borough's sewage infrastructure frequently fails, even without additional housing. It dumped 2,000+ hrs of raw sewage into the Loddon.

Implications of findings:

- Development and construction of sites has potential for profound wildlife and habitat destruction.
- Findings challenge developers' contention that development would 'enhance' biodiversity of sites and emphasises the constraints of the proposed sites.
- Sewage discharge data challenges assertions that the borough's sewage infrastructure has any capacity for additional housing.

Recommendations:

- Alternative development sites in the borough should be considered.
- Should 'Land East of Basingstoke' still be considered for potential development, the findings from this interim report demonstrate the need for independent and thorough ecological expert consultation. It should measure for the presence of *every* species noted in this report to avoid development from further cementing the UK's standing as one of the most nature-depleted countries.
- An updated water cycle study is also required. It should *transparently* assess the sewage processing capacity of the borough, be *realistic* about implications if investment does not materialise, account for historical performance, and report findings in a manner accessible to non-specialists.

Figure A
Draft plans from developers

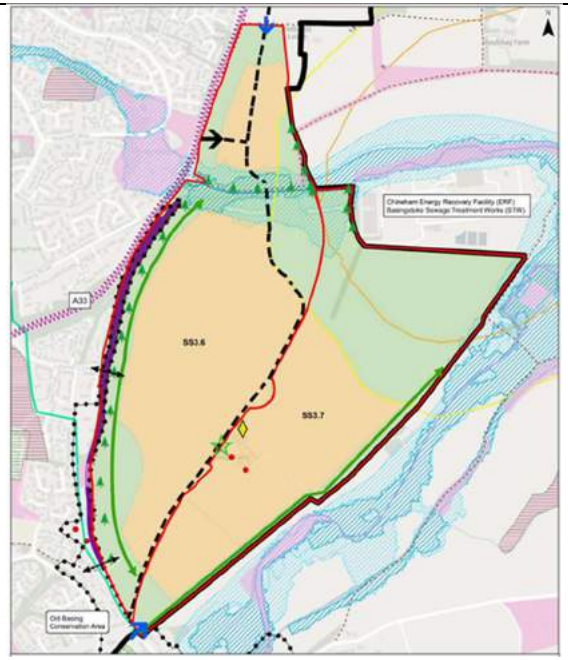


Figure B
Wildlife within site, given by HBIC data

(Legend notes on pg 4)

Figure C
Bats

Citizen scientist survey, interim findings

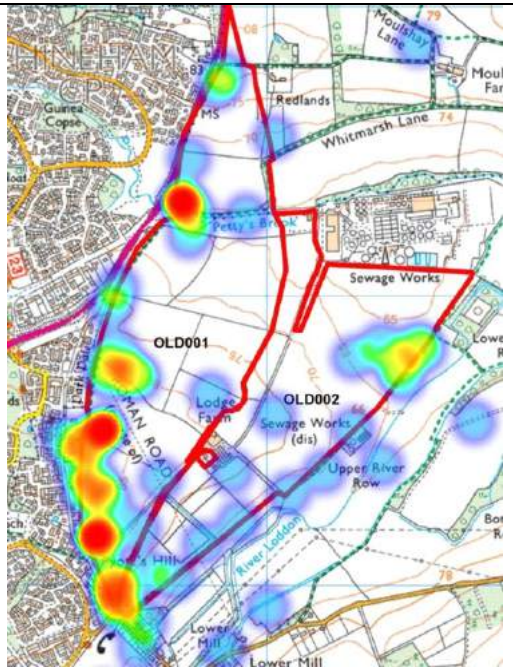


Figure D
Birds

Citizen scientist survey, interim findings

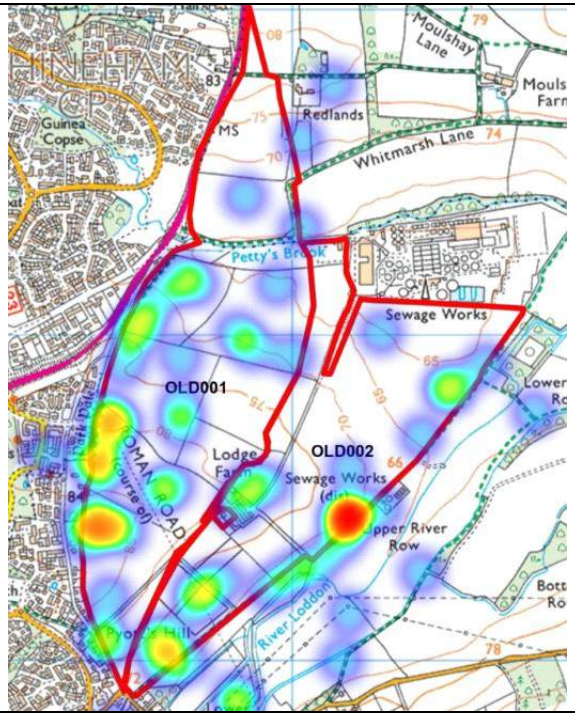


Figure E
Mammals

Citizen scientist survey, interim findings

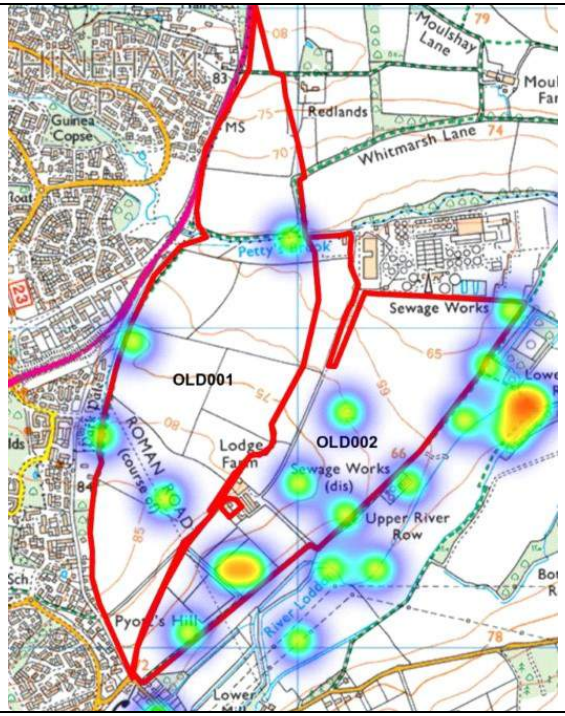
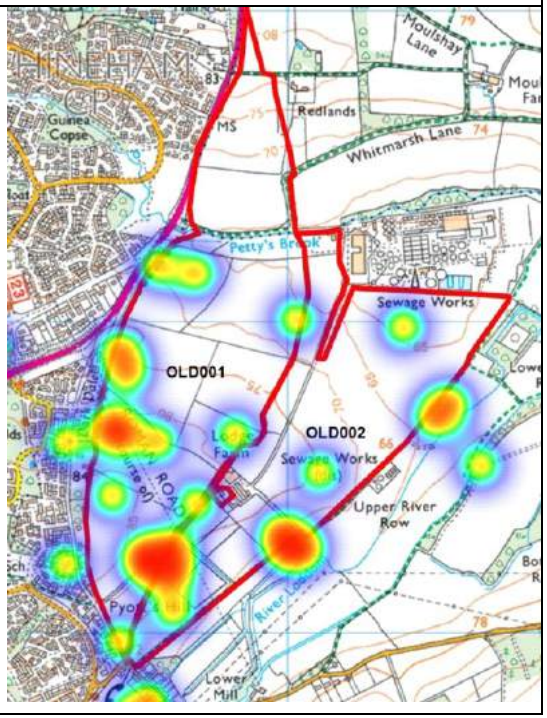


Figure F
Reptiles

Citizen scientist survey, interim findings



ESTIMATES OF POTENTIAL IMPACT ON PROTECTED & ENDANGERED WILDLIFE FROM PROPOSED DEVELOPMENT

1) Estimates of loss offered by routine historic data

Background

- The Hampshire Biodiversity Information Centre (HBIC) is the local environmental records centre for Basingstoke. It receives ecological data via the Habitat Survey Programme and from specialist recording groups (see https://tinyurl.com/4r6f3ypy).

Methods

- OBLEC submitted a request to HBIC for records pertaining to the two sites contained within the Land East of Basingstoke proposal.
- Data was provided by HBIC with reference number 11841 (officer: Evie Templeman).
- A wide range of data on flora and fauna contained within the sites was provided.
- Focus here is on Sites of Importance for Nature Conservations and wildlife of special interest.

Headline findings

National recognised SINCs

- The land proposed for development contains or sites immediately next to them include the following 3 Sites of Importance for Nature Conservation (SINCs) contained within the Hampshire Ancient Woodland Inventory. Namely, BD0633 Pyott's Hill Copse (32a Pyott's Hill, 0.28 ha), BD0661 Petty's Brook Strip (2.91 ha) and BD0665 Whitmarsh Lane and Piece (3.64 ha). The presence of these SINCs should be a material consideration. SINCs are known nationally as Local Wildlife Sites.

Wildlife

- To maximise confidence in the location of reported wildlife, only reports with coordinates with a precision of ≤100m were considered.
- Even with this restriction applied, there were still n=59 validated sightings on the sites (from 1997 to 2020).
- TABLE 1 shows the species, the number of different reports. The sightings covered n=30 different species.
- Of the species, n=20 are registered as endangered in England and/or have high levels of legal protection. The specific protections are shown in TABLE 1's footnotes.
- FIGURE B shows the sightings were spread across the sites. Red markers indicate species registered as endangered or with a high level of legal protection. Purple markers indicate locations where such species were noted multiple times.
- Note a single report does not necessarily equate with a single member of the species. It could include multiple animals being seen at the same time (e.g., a flock).

Implications

- Routine historic data signals the presence of a range of endangered species across the sites. Cross-referencing the sightings in FIGURE B with the proposed location for housing within FIGURE A shows the development risks disturbing the habitat of a plethora of endangered species.
- The data challenge the extent of green buffer currently being proposed and highlight the constraints of this greenfield site for development.
- Independent, comprehensive ecological assessments regarding the potential impact of the development on birds, bats, reptiles, and other mammals is required.

TABLE 1 The n=30 wildlife species reported with high precision within sites (red= endangered species and/or which has high legal protection)

Common name	Reports	Protection status
Skylark	5	Endangered [a, b]
Bullfinch	4	Endangered [a, c]
Eurasian Badger	4	Legally protected [d]
Yellowhammer	4	Endangered [a, b]
Brambling	3	Special penalties [e]
House Sparrow	3	Endangered [a, b]
Red Kite	3	Special penalties [e]
Song Thrush	3	Endangered [a, c]
Starling	3	Endangered [a, b]
Black-headed Gull	2	Amber conservation [c] Special penalties [e]

Common name	Reports	Protection status
Brown Long-eared Bat	2	Endangered [a] Legally protected [f]
Pipistrelle Bat species	2	Legally protected [f]
Redwing	2	Amber conservation [c] Special penalties [e]
Reed Bunting	2	Endangered [a]
W. European Hedgehog	2	Endangered. [a] Some protection [g]
Chiroptera Bat	1	Legally protected [f]
Crossbill	1	Some protection [g]
Daubenton's Bat	1	Legally protected [f]
Fieldfare	1	Endangered [b] Special penalties [e]
Grass Snake	1	Endangered [a] Some protection [g]

Common name	Reports	Protection status
Grey Heron	1	Some protection [g]
Grey Partridge	1	Endangered [a]
Herring Gull	1	Endangered [a]
Kingfisher	1	Special penalties [e]
Lapwing	1	Endangered [b]
Lesser Black-backed Gull	1	Amber conservation [c] Some protection [g]
Linnet	1	Endangered [b]
Marsh Tit	1	Endangered [b]
Mistle Thrush	1	Some protection [g]
Siskin	1	Some protection [g]

Notes:

[a] Listed as a rare and most threatened species under Section 41 of Natural Environment and Rural Communities Act (2006). https://tinyurl.com/bde36mu4

[b] Identified within red list of birds of conservation concern https://tinyurl.com/mrykmjjb;

[c] Identified within amber list of birds of conservation concern https://tinyurl.com/mrykmjjb;

[d] Badgers and their setts are protected by the Protection of Badgers Act 1992. https://tinyurl.com/4y9thypr;

[e] Included in SCHEDULE 1 Birds which are Protected by Special Penalties of the Wildlife and Countryside Act 1981. This includes it being an offence to recklessly disturb their nests or young. https://tinyurl.com/37jzkufa;

[f] Protected as European protected species under the Conservation of Habitats and Species Regulations 2017. This includes it being an offence to damage or destroy their breeding sites and resting places (even when not present). https://tinyurl.com/cnyp8z6z

[g] Some protection via standard provisions of the Wildlife and Countryside Act 1981. This includes it being an offence to damage or destroy the nests of species that reuse them: https://tinyurl.com/56z75zrk

2) Estimates of loss offered by contemporary citizen scientist data

Background

- The Hampshire Biodiversity Information Centre (HBIC) state the absence of evidence does not necessarily mean evidence of absence.
- Additional data sources are thus recommended to maximise confidence in what wildlife is present and address potential HBIC data limitations.
- Residents within the borough, familiar with the sites (who may use them daily) are one such source of data. The time they spend at the sites will typically be much longer than that associated with ecological surveys (which may last only a few hours).
- OBLEC thus launched an online 'citizen scientist' wildlife survey. Initiated on 19th August 2023, it is still continuing. We report here on its initial findings.

Methods

- Hosted by Qualtrics, the survey (https://tinyurl.com/OBLEC-Wildlife) asked persons to report wildlife they have seen in and around the proposed development site.
- To minimise burden, it focused on a set of endangered species. To maximise precision, persons were shown images of the species and asked which they had seen (or heard) on or near the sites within the last 3 years (2020-2023).
- An interactive OS map allowed individuals to record where sighting/s occurred.
- Adverts to complete the survey were circulated via posters and within social media groups frequented by borough residents.
- Persons needed to provide a name and email address to participate and avoid duplicate submissions. They could upload evidence to support sightings.
- Survey data can be made available to BDBC and any other stakeholders for scrutiny.

Headline findings

- **Responses:** During the first 2 weeks of the survey being 'live', n=68 submissions were received.
- **Species seen:** n=23 different endangered and/or legally protected species were reported on or near the sites at least once; n=14 species were not known via the HBIC dataset. TABLE 1 shows the species reported and number of different sightings.
- **Bats:** 50.0% of respondents reported at least one species' sighting. Species included the Soprano pipistrelle (n=10) and Barbastella bat (n=8). A total of 94 sighting locations were provided. FIGURE C shows these via a heatmap. Of the locations, 55.3% were within the sites. Sightings were distributed across the site, but particularly common near the entire western boundary of the site with Pyotts Hill.
- **Birds:** 46.4% of respondents reported at least one species sighting. Species included cuckoo (n=23), skylark (n=20) and yellowhammer (n=14). FIGURE D shows the 92 locations provided. Of them, 59.8% were within the sites. These were spread across the sites, but with a notable presence along the site's southern boundary.
- **Mammals (non-bats):** 30.4% of respondents reported at least one species sighting. Species included hazel dormouse (n=13) and badger (n=6). FIGURE E shows the 46 locations offered for the sightings. A number occurred within the sites. Some were just outside the site, near the adjacent River Loddon.
- **Reptiles:** 47.8% of respondents reported sightings of at least one species. Species included slow worms (n=25), grass snakes (n=12) and common lizard (n=7). FIGURE F shows the 48 locations offered for the sightings. Nearly all locations (91.6%) were within the sites.

Implications

- 'Citizen scientist' data corroborates *and* extends the routine HBIC data. It shows the high importance of the sites for a range of endangered and protected species.
- Sightings were reported across the sites. This indicates the inevitable risks of development and the constraints of the sites.
- Independent, comprehensive ecological assessments is required. It should consider the specific locations of the sightings, *all* the species reported and consider the impact of the different parts of the proposed development (e.g., habitat destruction associated with proposed bus exit from site, central road through the site).
- The wildlife survey remains 'live'. Further reports based on larger samples of respondents will be provided in due course.

TABLE 2 The n=23 wildlife species spotted by citizen scientists (at least once) in and near the sites (red= endangered species and/or which has high legal protection)

Common name	Reports	Protection status
Slow worm	25	Endangered [a]
Cuckoo	23	Endangered [a,b]
Bat – unspecified	20	Legally protected [c]
Skylark	20	Endangered [a, b]
Yellowhammer	14	Endangered [a, b]
Hazel dormouse	13	Endangered [a] Legally protected [f]
Grass snake	12	Endangered [a]
Water vole	11	Endangered [a]

Common name	Reports	Protection status
Soprano pipistrelle	10	Endangered [a] Legally protected [c]
Barbastelle bat	8	Endangered [a] Legally protected [c]
Noctule	7	Endangered [a] Legally protected [c]
Common lizard	7	Endangered [a]
Grey partridge	7	Endangered [b]
Linnet	7	Endangered [a,b]
European badger	6	Legally protected [d]
Lesser Horseshoe bat	5	Endangered [a] Legally protected [c]

Common name	Reports	Protection status
Lapwing	5	Endangered [a,b]
Greater Horseshoe bat	4	Endangered [a] Legally protected [c]
Bechstein's bat	4	Endangered [a] Legally protected [c]
Brown long eared bat	4	Endangered [a] Legally protected [c]
Adder	3	Endangered [a]
European otter	3	Endangered [a] Legally protected [c]
Smooth snake	2	Endangered [a] Legally protected [c]

Notes:

[a] Listed as a rare and most threatened species under Section 41 of Natural Environment and Rural Communities Act (2006). https://tinyurl.com/bde36mu4

[b] Identified within red list of birds of conservation concern https://tinyurl.com/mrykmjjb;

[c] Protected as European protected species under the Conservation of Habitats and Species Regulations 2017. This includes it being an offence to damage or destroy their breeding sites and resting places (even when not present). https://tinyurl.com/cnyp8z6z

[d] Badgers and their setts are protected by the Protection of Badgers Act 1992. https://tinyurl.com/4y9thypr;

UPDATED ASSESSMENT OF CAPACITY OF BASINGSTOKE SEWAGE INFRASTRUCTURE TO RELIABLY PROCESS WASTE FROM ADDITIONAL HOUSING

Background

- Proposed housing development would place additional demands on the borough's sewage processing infrastructure.
- The sewage of the proposed houses on the Land East of Basingstoke would be 'processed' by the Basingstoke Sewage Works.
- It discharges into the River Loddon – a rare, north flowing, salmonoid chalk stream and home to Stanford End Mill and River Loddon Site of Special Scientific Interest.
- Other parts of the borough's sewage infrastructure also discharge into the Loddon.
- BDBC previously commissioned a Water Cycle study. Published in 2022, but using data primarily from 2019, it proposed there was sufficient headroom within the borough's sewage infrastructure to process the additional sewage from the proposed housing (pg. 55 of report; https://tinyurl.com/2hk7xsdc). Its judgement is a key reason the Land East of Basingstoke is being considered for development.
- We assessed the performance of the Basingstoke sewage infrastructure in the years following those considered by the Water Cycle Study, *without* the presence of the proposed housing.

Methods

- Contemporary data on the performance of the Basingstoke sewage infrastructure discharging into the Loddon was secured from the River Trust (https://tinyurl.com/yfhzfwtv). This followed the advice of Charles Rangeley-Wilson, Chair of the Chalk Stream Restoration Group (https://tinyurl.com/35j33kej).
- Beyond the Basingstoke Sewage Works, Sherborne St John also discharges into the Loddon via the Wey Brook tributary and Sherfield-on-Loddon does via the Bow Brook. TABLE 3 shows the sensors monitoring for discharge of raw sewage into the Loddon from these areas.
- We also requested Environmental Flow Indicator (EFI) data for each point along the Loddon and any modelling from the Environment Agency. We await this data.

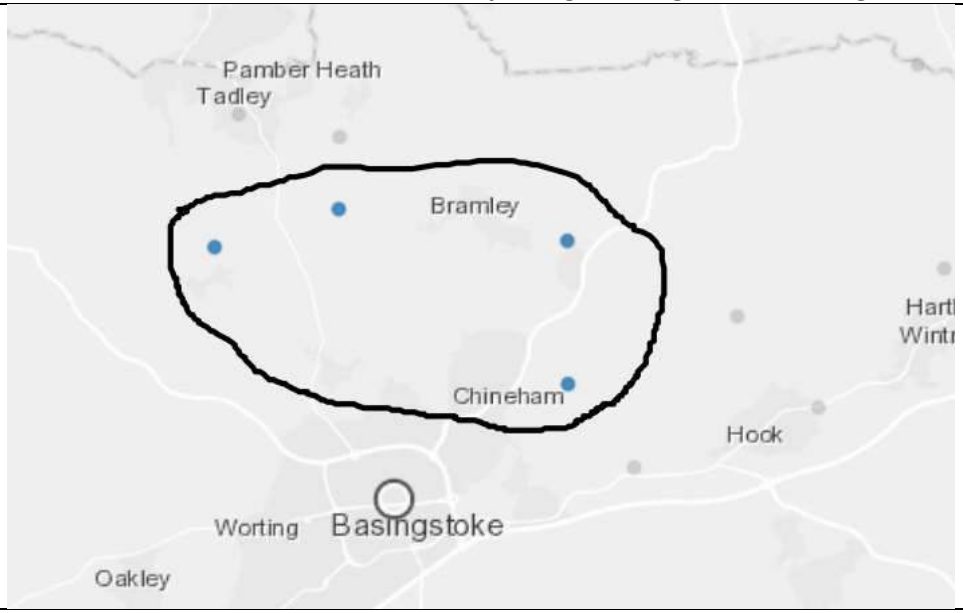
Headline findings

- TABLE 3 presents the event monitoring data. It shows that between 2018/19 and 2022 the Basingstoke sewage infrastructure has, *without* the additional housing, cumulatively discharged ~2,728 hours of raw sewage into the Loddon.
- The Basingstoke sewage works alone, discharged 473 hours of raw sewage into the Loddon.

Implications

- The Basingstoke sewage infrastructure regularly fails, even without the additional housing.
- The conclusions of the BDBC Water Cycle Study must be challenged. There is no reliable headroom to manage the additional housing.
- An updated, independent assessment is required. It should account for the recent performance of the sewage infrastructure shown here and include 'worst case scenario' estimates where anticipated investment does not occur in time. The previous report was overly optimistic.
- We would encourage any report emerging from an updated assessment to be accessible to non-specialists. It is they who will depend on it to make housing judgements. The 2022 report was highly technical, evidence lines not always clear and conclusions unclear.

TABLE 3 Map sensors capturing raw sewage discharge into River Loddon and their event monitoring data from 2018/19 to 2022

Location of sensors in the network capturing discharge of raw sewage into River Loddon	
	
Name of/ location of sensors	**Hours of raw sewage discharge recorded [a]**
Basingstoke Wwtw (Thames Water)	473.15
Sherfield-on-Loddon Wwtw (Thames Water) (via Bow Brook)	1258.64
Water End (Thames Water) (via Lyde River)	64.16
BS_ST STEPHENS HALL SPS (Thames Water) (via Bow Brook)	932.36
Total	**2728.31 hours**

Notes:

[a] 2018/19: https://data.catchmentbasedapproach.org/datasets/theriverstrust::event-duration-monitoring-storm-overflows-2018-19-england/explore
2020: https://data.catchmentbasedapproach.org/datasets/theriverstrust::event-duration-monitoring-storm-overflows-2020-england-and-wales/explore?location=51.274911%2C-1.028237%2C11.00
2021: https://data.catchmentbasedapproach.org/datasets/theriverstrust::event-duration-monitoring-storm-overflows-2021-england-and-wales/explore?location=51.283747%2C-0.994852%2C12.90
2022: https://data.catchmentbasedapproach.org/datasets/theriverstrust::event-duration-monitoring-storm-overflows-2022-england-and-wales/explore?location=51.293409%2C-0.991501%2C11.00