



Representation Form

Please complete a separate **Part B Representation Form** (this part) for each representation that you would like to make. One **Part A Representation Form** must be enclosed with your **Part B Representation Form(s)**.

We have also published a separate **Guidance Note** to explain the terms used and to assist in making effective representations.

Part B: Representation

Name and Organisation:	Environment Agency
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Q1. To which document does this representation relate?

- Regulation 19: Pre-Submission Draft of the Shropshire Local Plan
- Sustainability Appraisal of the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan
- Habitats Regulations Assessment of the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan

(Please tick one box)

Q2. To which part of the document does this representation relate?

Paragraph:	<input type="text" value="Various"/>	Policy:	<input type="text" value="Various as listed/detailed below"/>	Site:	<input type="text"/>	Policies Map:	<input type="text"/>
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Q3. Do you consider the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan is:

- | | | |
|--|-------------------------------|---|
| A. Legally compliant | Yes: <input type="checkbox"/> | No: <input checked="" type="checkbox"/> |
| B. Sound | Yes: <input type="checkbox"/> | No: <input checked="" type="checkbox"/> |
| C. Compliant with the Duty to Co-operate | Yes: <input type="checkbox"/> | No: <input type="checkbox"/> |
- (Please tick as appropriate).*

DP8. Gypsy and travellers sites

The Local Authority should ensure that it has fully taken into account the availability of water in new developments, particularly in areas of water stress (Shropshire is moving towards serious water stress). There is the need for appropriate foul drainage arrangement, to avoid extensive proliferation of non-mains drainage. Suggest reference to DP19 should be included to make it more effective.

DP19. Water Resources and Water Quality

We have some suggested amendments to make the policy more effective:

Proposals should help to conserve and enhance existing watercourses and riverside habitats in line with Policy DP12 wherever possible. Management, mitigation and compensation measures **'will be included'** ~~should aim~~ to improve water quality and create or enhance riverine and aquatic habitats.

Point 1 should be amended to say "maintain" or to meet good status.

Point 2b should be revised to: "Prevented hazardous substances from entering groundwater and limit non-hazardous pollutants from entering groundwater." This applies to **all groundwater**, not just within SPZ1 / SPZ's. <https://www.gov.uk/government/publications/protect-groundwater-and-prevent-groundwater-pollution/protect-groundwater-and-prevent-groundwater-pollution>.

Point 2 Private potable groundwater supplies would not be identified by the Environment Agency (on our SPZ mapping), but should still be considered as part of the planning process – such might be apparent through a water features survey and you might seek a default '50m radius' from any such supply to ensure this potential risk is covered. Your Private Water Supply team may further advise you.

Point 3 – We agree as there are certain development proposals (uses or design aspects) within a SPZ1, or the protection zone of a private potable groundwater supply, which will result in an 'Objection in Principle' from us. We would suggest you could add 'Development within SPZ2 and 3 will only be permitted where an appropriate risk assessment is provided'.

Some developments within SPZ2 or 3, will be considered on a risk based approach with the exception of developments involving deep soakaways, sewerage, trade and storm effluent to ground, which will only be supported where it can be demonstrated that these are necessary, are the only option available and where adequate safeguards against possible contamination can be agreed, implemented and maintained. Development proposals will be expected to provide full details of the proposed construction of new buildings and construction techniques, including foundation design.

Point 4 – Notwithstanding the commitment to high levels of water efficiency in new development, the Local Authority should ensure that it has fully taken into account the availability of water for new developments, particularly in areas of water stress.

Proposals in rural settings not served by mains foul drainage must consider the issue of appropriate foul drainage provision. Within Shropshire there are many people who rely on private water supply wells, boreholes and springs for their potable water. We do not encourage the extensive proliferation of non-mains drainage. Large scale development that is not able to be serviced by mains water or mains foul drainage could potentially have negative environmental impacts for water resource and water quality.

Note - Under the New Authorisations programme abstraction for dewatering to facilitate mineral excavation or construction works will no longer be exempt from abstraction licensing. Dewatering proposed excavations may lower groundwater levels locally and may affect nearby domestic and licensed groundwater sources and other water features. Should the proposed activities require dewatering operations, the applicant should locate all water features and agreement should be reached with all users of these supplies for their protection during dewatering. Subject to a detailed

impact assessment, to be carried out by the applicant, compensation and/or monitoring measures may be required for the protection of other water users and water features.

5-c... Non mains drainage should assess water quality impacts. There are other considerations as outlined on our non mains foul drainage assessment form (copy attached) for your consideration.

Point 7 – (re river restoration...) move to flood risk section (doesn't really sit with water resource/quality).

DP20 Water efficiency – support: linked to local evidence (including information we previously shared with you) demonstrating a need for and wider WCS viability work.

As an update, whilst not formalised yet, we published our consultation on the updated method and initial outcomes for determining areas of 'water stress' in England on 11 February 2021. The final assessment will provide the Environment Agency's advice to the Secretary of State on the water company areas that should be determined to be in areas of serious water stress. Of note, Shropshire is showing as an area of "serious water stress".

DP21 Flood risk: Some comments and suggestions to make the policy more effective and sound. The policy is quite long and seems to duplicate some parts of the NPPF and NPPG guidance. We previously advised to focus on specific local Shropshire flood risk requirements linked to the SFRA.

E.g. flood risk reduction and betterment for 'all' proposals in flood zone 3 'including climate change' (rather than just those subject to the Exception Test). And opportunities should be sought not just (part 10 of the policy)... but specifically... In those catchments where the cumulative effect of development is likely to have the greatest impact on flood risk, (as set out in the SFRA Level 2)

This part is confusing -

2. The Sequential Test is not needed for:

- a. Development on land allocated in this plan unless the use of the site **(is a greater vulnerability than that allocated?)**, or is not in accordance with the use specified in this Plan.

4.191 – 'sequential approach' is still necessary at the FRA level e.g. specific proposals on site to guide development to the best, lowest risk areas and to avoid flood risk.

4.194 – new Climate Change figures for peak river flow are coming out....

It should be noted that the climate change allowances (fluvial) have been revisited nationally following UKCP18 rainfall projections. We are finalising the position and will provide an update on this in due course in relation to potential uplifts for the fluvial peak river flow climate change allowances. We are currently looking at how that will affect our area and finalising options/guidance. The changes shouldn't be too significant, and for Shrewsbury it looks like the climate change is relatively similar to previous modelled information for the design event. So whilst Climate Change may worsen flood risk, the expectations for this to get worse is not quite as severe/progressive compared to previous and existing modelled data on the Severn e.g. at Shrewsbury i.e. it's already quite precautionary. Maybe include a line at the end of the text to refer to this update - include "as set out in the Shropshire SFRA-1" 'or as part of any future update to climate change allowances (for peak river flow)'.

4.195 – a separate (FRAP) permit or (LA permit) may be required.

Whilst we note the line in part 10...We would recommend that All development provided Flood risk contributions towards flood warning service or towards new or existing flood defence maintenance contributions would be sought where necessary in line with a specific FRA and the planning tests (to make the development acceptable...). Not just perhaps in “those catchments where the cumulative effect of development is likely to have the greatest impact on flood risk, (as set out in the SFRA Level 2) “

It should be an All development will (maybe particularly those within ...)

We would welcome this inclusion to help bring forward new or existing flood defence improvement schemes (provided to you as part of your Infrastructure Delivery (Implementation plan) that we or your Authority (LLFA led) are promoting e.g. Much Wenlock.

Note – Where Section 106 is necessary your 4.227 of Policy DP25 suggests that “It is expected this is only likely to be necessary on larger proposals of over 50 dwellings”. However a flood risk contribution (as we have done in the past for sites reliant upon/benefitting from defence and/or flood warning e.g. in Coleham, Shrewsbury for example) may be necessary and relevant to ‘any’ residential scheme.

4.186. This policy synthesises the requirements of the NPPF and the guidance in the NPPG to provide a clear explanation of the process by which planning proposals can minimise flood risk in the first instance and manage residual risk in the second.

It might be seen as a duplication.

The recognised flood risk policy hierarchy is to appraise, manage and reduce flood risk approach. This is normally looked at in terms of ‘assess’ – avoid, substitute (Sequential Test or Sequential Approach/Alternative uses), then control measures and mitigation (as a final option). Presumably by minimise flood risk in the first instance you mean avoid? And managing residual risk are those risks that remain after the usual appropriate design control mitigation has been fully considered/incorporated.

4.188 – SFRA also considered/ included a level of ‘climate change allowance’ – appropriate ‘at that time’ (in line with government guidance) note to new emerging update to peak river flows (fluvial).

4.193. Some suggestions - This policy sets out when a site-specific Flood Risk Assessment (FRA) is needed to inform a planning proposal. In considering the safety of the development, the FRA must demonstrate the occupants of any new dwellings will have access to an area of “**dry ground above the 1% river flood level plus climate change**” or safe refuge. Where prior evacuation is the safest option, the refuge should be an area outside of 1% annual exceedance probability **with climate change** flood event from all sources. Where prior evacuation is not preferred, internal safe refuge must be provided **at an appropriate level above the 1% with climate change, with appropriate freeboard, flood level**. The FRA should provide an evidence base for the Council to determine which option is the safest for that particular proposal. **This should include:**

FRA should demonstrate that the development has safe, pedestrian access above the 1% river flood level plus climate change. Pedestrian access should preferably remain flood free in a 1% river flood event plus climate change. However, in cases where this may not be achievable, the FRA may demonstrate that pedestrian access is acceptable based on an appropriate assessment of ‘hazard

risk' including water depth, velocity and distance to higher ground (above the 1% river flood level plus climate change). Reference should be made to DEFRA Hazard risk (FD2320) – 'Danger to People for Combinations of Depth & Velocity' (see Table 13.1 – DEFRA/EA Flood Risk Assessment Guidance for New Development FD2320 at:

http://evidence.environment-agency.gov.uk/FCERM/Libraries/FCERM_Project_Documents/FD2320_3364_TRP_pdf.sflb.ashx

DP22. Sustainable Drainage Systems

We consider any infiltration Sustainable Drainage System (SuDS) greater than 2.0 m below ground level to be a deep system and are generally not acceptable. All infiltration SuDS require a minimum of 1.2 m clearance between the base of infiltration SuDS and peak seasonal groundwater levels. All need to meet the criteria in our approach to managing and protecting groundwater: <https://www.gov.uk/government/publications/groundwater-protection-position-statements>. In addition, they must not be constructed in ground affected by contamination.

DP22 – point 6 could say

The appropriate climate change allowances 'for peak rainfall' should...

Also SuDS attention basins should normally be located outside of the 1% annual probability fluvial, with climate change, floodplain to avoid operational issues. (e.g. from the system flooding out during a flood event).

Maybe worth a line on rural SuDS and sedimentation control here - For guidance on Water Storage Reservoirs and Rural SuDS to help meet **Water Framework Directive** objectives please see https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291508/scho0612_buwh-e-e.pdf and <http://www.ukia.org/>

DP26 – Some suggestions to make it more effective:

Hydropower applications should pay attention to fish stocks, "migratory fish impact", and normally be accompanied by a Flood Risk Assessment (see also Policy DP21); "a **Water Framework Directive (WFD) Assessment and Geomorphological assessment**". Hydropower schemes typically alter flow regimes, sediment movement and can impact geomorphological processes and habitats, and thus affect fish, macrophyte and invertebrate populations.

J - maybe include:

impact on noise/vibration, air quality emissions, odour and dust/bio-aerosols...

DP31. Managing Development and Operation of Mineral Sites

Point 1 - Depending on location there are a number of potentially adverse impacts to the water environment that could arise from mineral quarrying activities (e.g. de-watering and the act of excavation potentially passively draining any perched groundwater systems). It is important that a detailed **comprehensive water features survey** is undertaken to identify any wells, springs, boreholes, watercourses, pools or other water dependent features; and, a **detailed conceptual model of the area**

(based on site specific geological and **hydrogeological monitoring information of at least 1 year in duration**) would have to be devised to inform a **comprehensive hydrogeological risk assessment**.

Whilst 1e says - Effects on surface waters or groundwater, some of the above detail (bold requirements) would be helpful to be included within the body text of the policy. It is fair to say that some mineral planning applications do not provide this information which creates issues based on uncertainty and potential risks.

Point 2 - By their nature mineral sites tend to be located in water-environment sensitive areas. Ensuring appropriate restoration measures are key in terms of protecting water resources and restoration may therefore be constrained.

Applicants and the Local Authority should understand that some restoration with materials will require an appropriate environmental permit; and, that granting of planning permission does not automatically mean that the Environment Agency would grant a permit. We encourage dual-tracking of the planning and permitting process. The Environment Agency may take the view that the proposed restoration does not meet the tests for deposit for recovery and instead constitutes a waste disposal activity, requiring a landfill permit. (See <https://www.gov.uk/guidance/waste-recovery-plans-and-permits>). Whilst applicable to some mineral restoration schemes, this also applies to planning applications for waste deposit or landfilling of course.

We would support opportunities to identify and deliver restoration to create habitat for white-clawed crayfish (ark sites) – maybe at Gonsal. And where appropriate multi-functional flood storage, to reduce flood risk; and biodiversity net gain provision. The policy could expand on this.

DP32 – waste management

Some suggested amendments: We note that ...'Further to Policy SP17, the development of waste transfer, recycling and recovery facilities will be supported where applicants can demonstrate that potential adverse impacts on the local community and Shropshire's natural and historic environment can be satisfactorily controlled' We would recommend this says can be satisfactorily avoided (e.g. through location of facilities (e.g. a relevant distance from a sensitive receptor) and then subsequently "controlled and managed" (through design, abatement, mitigation perhaps).

2a – maybe include "odour"? And say dust "and Bio-aerosols",

Explanatory text could include - Where developments are subject to an Environmental Permit from the Environment Agency, the EA would encourage pre-application discussions.

The policy could also include - "We would encourage the parallel (twin) tracking of an Environmental Permit application with the planning application to provide a greater degree of certainty (on the land use planning impacts and pollution control measures)."

"These applications should provide an appropriate level of detail to inform a reasonable degree of certainty on the planning application and to ensure the principle of the development and use of the land is acceptable with cross reference to permitting constraints".

A similar reference could be provided within SP17.....

DP33. Landfill and Landraising Sites

Point 2 The Local Authority should ensure that landfill/landraising sites are located appropriately with reference to appropriate documents/policies (<https://www.gov.uk/government/publications/groundwater-protection-position-statements> and <https://www.gov.uk/guidance/landfill-operators-environmental-permits/plan-the-environmental-setting-of-your-site>). Reference to DP19 should be included.

Groundwater Protection Position Statement E1 states:

The Environment Agency will normally object to any proposed landfill site in groundwater SPZ1.

For all other proposed landfill site locations, a risk assessment must be conducted based on the nature and quantity of the wastes and the natural setting and properties of the location.

Where this risk assessment demonstrates that active long-term site management is essential to prevent long-term groundwater pollution, the Environment Agency will object to sites:

- *below the water table in any strata where the groundwater provides an important contribution to river flow, or other sensitive receptors*
- *within SPZ2 or 3*
- *on or in a principal aquifer*

The policy could be improved to include for some of the above points. E.g. avoidance / not encouraging such within SPZ1 or any nominal SPZ for unregulated SPZ supplies. A detailed risk assessment to look at nature and quantity and impacts and water table monitoring/assessment.

Parallel tracking is recommended. The hydrogeological risk assessment submitted with a landfill permit application can be used to determine how position statement E1 applies to the planning application. Sites below the water table in sensitive groundwater settings as indicated above should be refused.

Policy SP1

c – could say... “addresses the effects of”, “avoids” and mitigates the impacts of climate change...

We note the references to the Big Town Plan (BTP) in SP1...and similar in Policy SP2, with lines such as “...support of the delivery of the Big Town Plan and its related masterplans”.

We did advise that some of these masterplan sites e.g. Riverside, Shrewsbury (we’re not party to full detail, but a number are within ‘functional floodplain’/flood zone 3a) could be considered as part of the ‘evidence base’ alongside of the local plan, but this was not forthcoming in the plan strategy. We have not been party to any formal Big Town Plan or associated masterplan consultation, which in our view has limited weight. We wouldn’t want to infer any sites looked at as part of a non-statutory plan have any additional weight by linking to this local plan review policy.

S16 – Shrewsbury:

It states that... *comprehensive and co-ordinated approach will be pursued to the planning and development of Shrewsbury, and to ensure that development is consistent with the objectives of the Big Town Plan and its associated masterplan documents, which are material considerations in decision making. The plan policy also refers to ‘development opportunities within the Shrewsbury development boundary, and in particular the town centre’.*

There are also a few references in the reasoned justification text to the BTP (a masterplan document and associated site masterplans) being a “*significant*” ‘material consideration’; but we would potentially challenge that – it might be reasonable to mention a ‘regard to’ a potential vision/design steer perhaps, but any inferred sites in the BTP/subsequent masterplans would have limited weight unless it is a statutory DPD, neighbourhood plan area (it isn’t a designated one presently) or allocated in the local plan itself. We appreciate the BTP and any masterplan is a guidance document adopted by the Local Authority (no examination, no statutory consultation has taken place with us, no evidence base to support it or justification to ensure it is effective, robust and the most sustainable – SA appraisal wise; to ensure objectives/potential sites are realistic, viable and deliverable).

The plan text says it (BTP) is “*prepared in consultation with the public and adopted by Shropshire Council as a significant material planning consideration*”. We did discuss this with you as part of earlier evidence base conversations and any potential sites to ensure they might be sequentially/evidence base tested. Of course care should be taken to ensure viability, not to show inaccurate details or significant elements that haven’t been decided upon.

Going forward, we would treat these development opportunity sites within the Shrewsbury development boundary, and in particular the town centre, as windfall sites and as part of any strategic/masterplan consultation (including any) we formally receive. As mentioned previously, this would be as part of any future strategic planning consultation work (Strategic Development Framework or masterplan)/appropriate pre-planning application engagement (cost recovery) with us. An appropriate evidence should inform this.

Point 7. Your plan states that... “*delivery of the North West Relief Road (NWRR) is supported in principle, and as such the proposed line of the road is identified on the Policies Map. Development opportunities between the proposed NWRR and the Development Boundary will be guided by Policy SP10. In this area it is recognised that windfall employment proposals on appropriate sites adjoining the development boundary will be supported in principle where they meet the requirements of Policies SP13 and SP14 and where suitable vehicular access can be provided.*”

As part of EIA scoping for the road, we have flagged environmental issues and concerns (primarily to avoid groundwater impact and the SPZ – public water abstraction in that area). We outlined the need to consider and be transparent on potential alternative routes/design for the road. This may also now link to your strategic climate change strategy and sustainability options. We previously flagged the need to consider alternative route design to avoid impact upon water resources and environmental issues.

We note you have the road as a ‘line’ on your plan. Whilst this is included it has not been subject to any local plan making evidence as such and we read this as an indicative possible route. The road option(s) have not been tested as part of the local plan process or as part of

evidence for this plan or otherwise. We appreciate work is ongoing in that respect to inform any detailed proposal, no planning application is submitted to date; and that the local plan does not pre-determine the outcome of this.

Linked to your policy wording, for the record we also previously raised reservations about potential allocation(s)/infill development sites, within the Shelton area specifically (between the suggested road and development boundary), being developed and would strongly object to such in line with the advice provided to you at previous plan making stages. We support the removal of that site (non-inclusion/direct reference) at this plan making stage.

10 c - our preference is for avoidance of inappropriate development within the floodplain.

12 (b) - should include 'water abstraction areas', as a key environmental consideration to avoid inappropriate development and impact upon.

Policy SP3 Climate change:

4. Mitigating and adapting to the impacts of climate change, including by: a.

Should include "by avoiding inappropriate development in fluvial flood risk areas".

Your plan appears centred around increasing growth and economic productivity...in line with our strategic climate change objectives and move towards net zero carbon, your Council's declaration and SA objective, we would encourage you to ensure all growth and related transport options are sustainable in the long term with emphasis on addressing the effects of climate change too.

Support - Integrating water efficiency measures to mitigate the impact of drought and reduce resource and associated energy consumption. Whether it needs to link to policy DP20; and/or refer to the expected higher levels of water efficiency standards here? (Noting future likely 'serious water stress' in Shropshire) – see DP20 comments.

SP8 -

States– *"All necessary supporting studies in relation to site constraints, infrastructure and other development requirements specified by the policies in this Local Plan have been undertaken by a suitably qualified individual and the specified requirements can be provided and any identified adverse impacts satisfactorily mitigated through the development"*.

In line with comments made to the Water Cycle Study and waste water infrastructure there are capacity issues associated with some areas – a lack of mitigation options to show if and how some impacts can be overcome (deliverability). This should be informed by your evidence base to identify and ensure any infrastructure requirements are deliverable.

SP9. Managing Development in Community Clusters – the rural nature of Community Clusters means that early consideration should be given to the availability of water in new developments (particularly in areas of water stress), adjacent private water supplies and non-mains foul drainage. The issue of appropriate foul drainage provision is particularly important in such settings. Within Shropshire there are many people who rely on private water supply wells, boreholes and springs for their potable water. We wouldn't encourage the extensive proliferation of non-mains drainage. Large scale development that is not able to be serviced by mains water or mains foul drainage could

potentially have negative environmental impacts for water resource and water quality. Reference to DP19 should be included. There may be options for ‘first time’ mains sewerage systems.

SP16. Strategic Planning for Minerals - Ensuring appropriate restoration measures are key in terms of protecting water resources. Restoration with soils will require a waste exemption or may require an appropriate environmental permit. Dual-tracking of the planning and permitting process for mineral sites, with waste recovery/landfilling, is advisable (See <https://www.gov.uk/guidance/waste-recovery-plans-and-permits>).

EVIDENCE BASE

Strategic Flood Risk Assessment (SFRA):

The Level 1 Strategic Flood Risk Assessment is a high-level strategic document, looking at all sources of flooding, and does not go into detail on an individual site-specific basis. We note the SFRA is intended to help Shropshire Council in applying the Sequential Test for their site allocations and identify where the application of the Exception Test may be required via a Level 2 Strategic Flood Risk Assessment.

We haven't reviewed all sites as part of our review of this plan or SFRA L2. We rely on sites that may come forward being sequentially tested etc by you, as the LPA and appropriately assessed to ensure sustainability, including all sources of flooding.

With regard to the evidence base process and coverage, we note that some sites were taken forward to be looked at in more detail but in the absence of any modelling the Flood Zone 2 (1000 year fluvial) layer has been used as a nominal 'indication' of the likely 1% with climate change fluvial extent. Some smaller un-modelled ordinary watercourses haven't been remodelled as part of the Level 2 SFRA process either. It appears that the surface water mapping depth and velocity data was used as an indication of flood risk for these small(er) watercourses.

Some sites have used available modelling such as Shrewsbury strategic sites, where our (EA) detailed 2019-2020 fluvial hydraulic model of the River Severn (initial phase 1 output) was used in the SFRA to re-model/interpret the 2080s climate change scenarios for the 100-year (+25%), 100-year (+35%) and a 100-year (+70%) events. For Ironbridge site, this model wasn't used/available and our original Flood Zone mapping and River Severn 1D hydraulic model (Buildwas to Bewdley model) has been used in this assessment. As JBA confirm, *at the time of the assessment, the River Severn was being re-modelled in a phasing of reaches, with Abermule to Shrewsbury completed first. Applicants undertaking future Flood Risk Assessments should contact us to obtain latest model results following completion of the Severn modelling study. A SFRA update, would inform any further strategic development opportunities in Shrewsbury (not subject to this current SFRA).*

We appreciate that the majority of sites within the level 2 summary table are at risk of fluvial flooding. However, the degree of flood risk varies, with some sites being only marginally affected along their boundaries, and other sites being more significantly affected within the site, such as SHR177 and IRN001. The SFRA suggests that "more detailed investigations on sequential site layouts, SuDS possibilities, safe access and egress etc, as part of a site specific Flood Risk Assessment at a later stage". For sites such as these there are additional risks to consider such as steering development and access away from highest risk areas.

The SFRA concludes that all sites in the summary table should be developable to some degree (based on Table 6.1) if the detailed advice is followed with a 'sequential approach' to developing the sites expected. As an example, Site SHR177 (Oak Farm, Gains Park, Shrewsbury) looks 'difficult' perhaps with 18% in 3b (functional floodplain) and 23% in 3a/3b/2 - but of course 77% of the site in Flood Zone 1.

In terms of 'climate change', we have commented elsewhere on this, but the SFRA concludes that fluvial extents would be larger than Flood Zone 3 (100 year), but maximum extents are likely to be similar to Flood Zone 2. At the present time (subject to upcoming changes to fluvial climate change uplifts) we generally require the 100-year plus 35% and 100-year plus 70% climate change fluvial scenarios to be considered in future housing developments (more vulnerable). These will likely be updated this year.

To cover development sites, in the absence of detailed modelling as part of the SFRA, or model availability etc, there is a caveat suggested in the SFRA that - at the planning application stage, developers may need to undertake more detailed hydrological and hydraulic assessments of the watercourses where there are no detailed hydraulic models present, to verify flood extent (including latest **climate change allowances**), inform development zoning within the site and prove, if required, whether the Exception Test can be passed.

This should be carried forward into the individual site requirements. For some sites, this will also need to include any smaller un-modelled, often 'ordinary' watercourses (with a catchment less than 1km²). The remodelling of that could impact upon site area deliverability and safe development requirements, and the need to factor potential blue infrastructure improvements.

SFRA Level 2, Section 8.2.2 regarding Source Protection Zone (SPZ)'s - should also refer to the restrictions for surface water discharges to ground within SPZ1. In terms of SPZ1 (and associated sensitive water abstraction areas), we previously raised concerns on the Shelton site (mentioned elsewhere) which has been removed. This is welcomed and we support that exclusion based on our previous concerns and recommendations on the appropriateness of that land use.

.....

Water Cycle Study (WCS):

For completeness we offered to review the WCS last summer (2020) as part of our pre-application service but this was declined.

We have not reviewed every single site against the WCS findings. However, following a review as part of this formal plan making process, we have some concerns that the evidence is not effective, justified or consistent with national policy. On this basis it makes the local plan unsound. Our comments are supported by your SA objective SO9 to conserve and enhance water quality in Shropshire and reduce the risk of water pollution.

For example, your WCS/local plan is not clear on potential options/solutions relating to wastewater infrastructure for areas where there is a capacity issue of sorts and not an identified solution perhaps. For some there may be a need for a phasing policy until such time that a particular solution is actioned – but is it a viable and identified, deliverable action? (the WCS and plan is lacking in this regard).

In the absence of further detail we are raising concerns relating to the need for an effective, robust evidence base focusing on 'deliverability', particularly as some of the growth allocation areas don't have an identified solution/have not been thought about or looked at in enough detail (e.g. the Clun as the most complex and sensitive perhaps, but some other areas of Shropshire too). For some areas, the WCS mentions the need for "pumping out of catchments" but this needs to be examined at this stage to inform likely viability and cost, deliverability etc.

As part of our previous discussions with you on the WCS, our previous advice to you has been that, where this is the case and there is an identified constraint (amber or red) you should demonstrate that there is a solution (it may be already programmed, or could be a possible future infrastructure upgrade) to help improve the capacity issue whilst preventing environmental deterioration and enable the development to go ahead. This will require consultation with the Water Company, and NE in the case of the Clun for example.

The outcome of further work/discussions may inform a 'phasing' policy within your plan where appropriate. It may also be necessary to produce an 'Infrastructure Delivery Plan' to set out any key milestones for waste water infrastructure upgrades and improvements. The evidence you produce should give a reasonable degree of certainty to all parties, helping demonstrate development is 'deliverable' and will not deteriorate the environment (e.g. via hydraulic modelling from the water company), and importantly ensure that your plan is 'sound'. It may be that some sites cannot be developed or need to be pushed back in the plan programme.

Note: Government Guidance states that sufficient detail should be provided to give clarity to all parties on if/when infrastructure upgrades will be provided, looking at the needs and costs (what and how much). The NPPG refers to "ensuring viability and deliverability – pursuing sustainable development requires careful attention to viability and costs in plan making and decision making". Plans should be "deliverable".

Some specific comments on the WCS and some key growth areas:

- Section 9.7 - Comment is made as such in numerous parts of the study to '*...further mitigation may need to be taken to accommodate growth and options include pumping wastewater to a different WwTW or changing the point of discharge to a less sensitive waterbody*'. This is not as easy as it may seem and the study does not pick up on the issue that transferring flow out of a catchment can cause more environmental harm as a result of the loss of flow from the original watercourse and then the need for assessment at any new location. We haven't listed all relevant sites here but further work is required to address this.
- Section 6.3 – Methodology - With reference to the following point '*...a red RAG score given by the water companies reflects the presence of sewer flooding, CSO spills or pollution events in the vicinity of the site, on the assumption that an increase in wastewater flows from development would make those occurrences more likely in the future...*' We consider that impacts of the growth could be seen some distance from the development site depending upon the location of the first impacted storm overflow or even a cumulative effect in the sewer network. We are a bit concerned that just the immediate vicinity has been screened.

- Section 6.6.1 - The following comment has been made with regards to the Strategic Sites 'All of the strategic sites were scored red by STW who gave the following comments for each of the sites: Consider on-site treatment system. In reality this is probably more difficult than it may seem as any new discharge from an on-site treatment system would need to be assessed in terms of strict no deterioration policy as opposed to river needs permitting.
- Table 7.2 Summary of WwTW flow assessment – could benefit from a column showing the proposed growth for easy comparison with the perceived headroom capacity.
- Section 9.1 – Phosphates – there doesn't appear to be any reference to the fact that a large percentage of phosphate in the sewer network originates from phosphate dosing into water supply to prevent lead leaching from water supply pipes.
- Figure 9.1 – Is the wording in light green outcome box correct? Shouldn't it read 'GES *can* be achieved using current technology'?
- Possible typo in section 9.4 – SIMCAT modelling approach - Run type 9 within SIMCAT was then used which assumes that **upstream flow each treatment works is at good ecological status**. The permit value required to achieve GES is then calculated by the model.

- In Table 9.2, we are surprised that there appears to be no 'WFD standards' for some of the works. This hasn't been fully checked but we suspect they may exist for the following:

Bishops Castle - Snakescroft Bk (GB109054044061)

Chirbury - Tributary - source to conf R Camlad (GB109054049290)

Ditton Priors - Rea - source to conf Farlow Bk (GB109054044281)

Dorrington - Cound Bk - conf unnamed trib to conf unnamed trib (GB109054049400)

Ellesmere Wharf Meadow - Tetchill Bk - source to conf R Perry (GB109054055000)

Prees Golfhouse Lane - Soulton Bk - source to conf R Roden (GB109054049201)

Rushbury - Byne Bk - source to conf Quinny Bk (GB109054044370)

The above should be clarified and updated in the WCS, with appropriate actions taken.

- **11.3 Point source pollution** -a summary of their potential impact following a source-pathway-receptor approach is presented in Table 11.1. It doesn't appear whether the actual relevance of the SSSI designation or whether it is in continuity with the watercourse has been considered in this table.
- **Section 11.7.1** States that '*SuDS allow the management of diffuse pollution generated by urban areas through the sequential treatment of surface water reducing the pollutants entering lakes and rivers, resulting in lower levels of water supply and wastewater treatment being required. This treatment of diffuse pollution*

at source can contribute to meeting WFD water quality targets, as well as national objectives for sustainable development’ - but it doesn’t appear to recognise the benefits they offer in terms of reduced flows in combined sewers and so the potential reduction in storm impacts via CSOs and storm storage overflows

- **Section 12.3 - Growth in the Clun catchment** - The report states that *‘the current allocated and committed growth in Shropshire has been made possible by upgrading phosphate stripping processes in the WwTW in the Clun catchment in order to reduce point-source inputs of nutrients, however any additional growth in the catchment would need further measures to ensure no deterioration to water quality in the catchment’*.

Our understanding was that ‘projected future growth’ was included in the requirements of the AMP6 schemes but this will not have accounted for any additional growth in this WSC, or local plan review, so yes, this additional growth alone would need further measures. These need to be understood and demonstrated to be deliverable.

- Table 12.2 Options – Farm management – any nutrient removal via this route must be above and beyond what we would expect the agricultural sector to achieve in any case e.g. regulatory minimum
- Additional growth as part of the preferred options and strategic sites identified in the Local Plan Review, would reduce the percentage phosphate load removed to under 75%. However, in AMP7 Bishops Castle is also due to be upgraded and its permit tightened to 0.4mg/l (from 0.43mg/l) to ensure future compliance. This is predicted to offset the proposed additional growth, and even allow some betterment in comparison to AMP6. Severn Trent Water have therefore commented that they would not need to *“undertake further work to accommodate the extra 121 houses over and above the work already scheduled at Bishops Castle. This work alone is sufficient to ensure no net detriment to the SAC.”*

This needs further clarity. Our understanding was that the initial growth projections were accounted for in the 75% load reduction but not the additional considered in this review. The AMP7 scheme at Bishops Castle is a No Deterioration scheme which assessed the possible impact if the STW discharged at the limit of its permit. Discharging at permitted load would cause a deterioration in the receiving watercourse so the P limit was tightened to ensure the load would not increase. Question is, are STWL suggesting that the current headroom at permitted volume would be sufficient to accommodate all the additional growth proposed for the Clun catchment?

We would advise you to update the WCS and seek further clarification. To assist capacity considerations, in discussion with Severn Trent Water, you could check how much additional flow would be expected and where. We can then assess what further Phosphate reduction would be required to maintain the promised load reduction and how feasible that would be etc. Any identified action or option will need to come out as likely feasible, viable, and deliverable. This would also need to consider nutrient neutrality.

Please also refer to our comments on the **HRA and DP14**.

HRA:

Q1. To which document does this representation relate?

- Regulation 19: Pre-Submission Draft of the Shropshire Local Plan
- Sustainability Appraisal of the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan
- Habitats Regulations Assessment of the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan

(Please tick one box)

Q2. To which part of the document does this representation relate?

Paragraph:	<input type="text" value="HRA various"/>	Policy:	<input type="text" value="As detailed below, including some related to DP12 and DP14 (as referenced)."/>	Site:	<input type="text"/>	Policies Map:	<input type="text"/>
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Q3. Do you consider the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan is:

- | | | |
|--|-------------------------------|---|
| A. Legally compliant | Yes: <input type="checkbox"/> | No: <input checked="" type="checkbox"/> |
| B. Sound | Yes: <input type="checkbox"/> | No: <input checked="" type="checkbox"/> |
| C. Compliant with the Duty to Co-operate | Yes: <input type="checkbox"/> | No: <input type="checkbox"/> |
- (Please tick as appropriate).*

Habitat Regulations Assessment (HRA)

The Severn Estuary SAC/SPA/Ramsar designations include the designation of migratory fish which use all of the main River Severn through Shropshire and the majority of the River Severn tributaries to live and breed in. It is important that potential impacts to water quality, water quantity, recreational pressures, such as from angling, boating, swimming and even walkers along riverside

footpaths and the potential for increased introduction of aquatic diseases are considered in the Habitat Regulations Assessments for the dependent tributary habitats in Shropshire.

Section 3.13 states that SSSIs, SAC and Ramsar sites within a 20km drainage range were assessed and that there were no surface water flow routes between the preferred strategic sites and any Ramsar sites. As stated above the Severn Estuary designation includes migratory fish which use the majority of river tributaries in Shropshire. The 20km cut off range is therefore not appropriate as this misses out assessing dependent habitat for the Severn Estuary SAC and Ramsar site.

Section 3.2 does not include the Severn Estuary Ramsar designation along with the Severn Estuary SAC and SPA. Section 3.5 notes impacts to the Severn Estuary designated sites features i.e fish and bird populations could arise from water quality, but it does not include potential impact arising from water quantity. Low flows from increased abstraction for development would exacerbate nutrient enrichment.

Hencott Pool Ramsar site has been screened out of the HRAS2 assessment for recreational impact. Whilst there is no formal public access to Hencott Pool there is informal access. Increased residential housing in the area is highly likely to increase the amount of public usage of the site which could lead to water management impact; vegetation disturbance and destruction and the introduction of invasive plants.

Introduction of invasives - only sites with public access have been taken to Stage 2, but informal access is available around sites and if nearby residential numbers increase there is potential for impact,. For example crayfish plague which would cause the local extinction of the white-clawed crayfish, spread of Himalayan Balsam, Japanese Knotweed or Giant Hogweed which decrease plant diversity and cause bank erosion. A mitigation measure of managing visitor numbers and access needs to be discussed in stage 2 for all of the sites.

The potential impacts of air pollution to the designated sites does not appear to have been discussed within the HRA such as from increased or closer road traffic and construction.

The conclusions of stage 2 assessment are that local plan sustainability policies DP20 to 23 will protect waterbodies from adverse effects. (3.21). However a number of settlements have been scored as 'amber' or 'red' for water supply or wastewater infrastructure in the Shropshire Water Cycle Study meaning that significant infrastructure may be required to accommodate it. These settlements should be flagged as mitigation measures not yet agreed for the HRA assessment until further discussions and agreements have taken place between the water cycle study group and Severn Trent Water. There needs to be options presented to provide certainty and ensure deliverability. Please refer to our separate comments on ensuring an effective WCS evidence base.

Section 3.23 describes the **River Clun SAC** states the importance of low nutrient levels for the health of the Pearl Mussels, for which the site is designated. The paragraph, however fails to also consider the inter-dependency of the Pearl Mussels on Trout and Salmon to complete their lifecycle. These fish require good water quality and habitat in the River Clun, as well as the downstream River Teme and River Severn to support the Pearl Mussels. Adequate water quantity is also required by these species. Unnatural volumes and frequency of flooding and drought which could also be exacerbated by development would also impact the Pearl Mussels and fish.

DP14 related -

3.31. A specific policy **DP14. Development in the River Clun Catchment** has been put forward in the DLP to avoid impacts on the Freshwater Pearl Mussel and the SAC. The policy states:

1. To protect the integrity of the River Clun Special Area of Conservation and to comply with the Habitats Regulations and policy DP13, development within the catchment of the River Clun will only be permitted if it can demonstrate either nutrient neutrality or nutrient betterment.
2. All measures relied on to deliver either nutrient neutrality or nutrient betterment must demonstrate with sufficient certainty that they:
 - a. Meet the required nutrient reduction or improvement; and
 - b. They can be secured and funded for the lifetime of the development's effects.

The HRA assessment for the local plan has concluded that through use of Development Policy and Settlement Policy wording and the statutory requirement for a project level HRA for development, there will be no adverse effects on the integrity of the River Clun SAC as a result of the Draft Local Plan. In the absence of further information to demonstrate otherwise, we would not be in a position to concur with the above. One option to remedy this would be to recommend that local plan development is not allocated in the Clun catchment. There may be scope for individual windfall site proposals to be assessed on an individual basis but there needs some discussion on that to ensure likely mitigation has a reasonable prospect of delivery.

The nutrient benefit effects of rewilding and increasing capacity of the sewage system and individual technological innovations that could ensure that developments achieve nutrient neutrality, or nutrient betterment cannot yet be calculated. There is therefore no mitigation presented at this time that can guarantee catchment scale 'nutrient neutrality' for the scales of the local plan. Agreeing residential and business development allocation in the Clun catchment without certainty on what these mitigation measures could deliver for the nutrient status appears to present too high a risk of the Clun SAC being damaged.

Reference should be made to our comments on the Water Cycle Study and potential growth options in the Clun catchment.

3.4 River Dee SAC

Housing allocation within the River Dee catchment is relatively low and there is current or already planned upgrade capacity for wastewater and water resource infrastructure. Policy DP20-23 seems a reasonable mitigation option for HRAS2 assessment for the River Dee SAC.

3.54 Montgomery Canal SAC

There are plans to reconnect dry sections of the Montgomery Canal. We advise the Canal and Rivers Trust should be contacted to provide comment on the HRA conclusions for the local plan allocation, as mitigation areas close to the canal are required for the Floating Water Plantain and Great Crested Newts in-order to allow the restoration of the canal. Pressures from increased recreational use of the Canal should also be considered by the Canal and Rivers Trust together with the requirement for individual developments to be subject to a full HRA assessment and adherence to DP policies 13, 15, 16. Suggest the introduction of invasive plants and animal disease also needs to be added to this section.

Fenns, Whixal, Bettisfield, Wem. Cadney Mosses, Marton Pool, Morton Pool, Brown Moss, Colemere, Whitemere SAC and Ramsar sites.

HRAs at project scale that consider foul drainage, water resource and recreational pressures are sufficient mitigation for the HRA2. Provision for new green open spaces and nature networks should be planned now within the local plan to ensure that there is a co-ordinated plan for providing alternatives to these sites, particularly near Colemere where adverse recreational pressure has not been ruled out.

Blue/green corridors - New Green open spaces for recreation and nature recovery networks such as B lines (Buglife) need to be included in the local plan allocation principles to ensure that the aims of the Government's 25 Year Environment Plan to have a resilient network of land and water that is richer in plants and wildlife is achieved in Shropshire. Whilst the Sustainability Appraisal and Site Environmental Assessments have taken into account existing designated wildlife areas the local plan does not appear to plan new nature corridors or green/blue recreational space. This could be included and improved upon within the policy (**DP12** perhaps) and/or site specific locations.

DP12- The Natural Environment

The local plan provides a hook to the provision for Biodiversity net gain which is to be mandated by the forthcoming Environment Bill. Evidence is not provided that there will be sufficient space on or off site to meet the 10% biodiversity net gain obligation. If Biodiversity net gain provision is planned together with the development allocations within the local plan then more coherent nature networks could be achieved.

Settlement Policies

Q1. To which document does this representation relate?

- Regulation 19: Pre-Submission Draft of the Shropshire Local Plan
- Sustainability Appraisal of the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan
- Habitats Regulations Assessment of the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan

(Please tick one box)

Q2. To which part of the document does this representation relate?

Paragraph:	<input type="text"/>	Policy:	<input type="text" value="Settlement Policies"/>	Site:	<input type="text" value="Various settlements as listed below"/>	Policies Map:	<input type="text"/>
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Q3. Do you consider the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan is:

- | | | | | |
|--|------|--------------------------|-----|-------------------------------------|
| A. Legally compliant | Yes: | <input type="checkbox"/> | No: | <input type="checkbox"/> |
| B. Sound | Yes: | <input type="checkbox"/> | No: | <input checked="" type="checkbox"/> |
| C. Compliant with the Duty to Co-operate | Yes: | <input type="checkbox"/> | No: | <input type="checkbox"/> |
- (Please tick as appropriate).*

Settlement Policies

We haven't reviewed all sites in relation to flood risk or waste water (as suggested in our comments elsewhere) but the following are issues of note/suggestions to inform groundwater/water quality and contaminated land considerations at some locations, including mineral sites. This is primarily linked to your SA objective SO9 to conserve and enhance water quality in Shropshire and reduce the risk of water pollution; to ensure they are justified and make them more effective and sound.

Planning policies and decisions should ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.

Bridgnorth

BRID001 and BRD0020b are the livestock market so contaminated land aspects would have to be considered. There is a licensed borehole at this site which, if no longer used would have to be appropriately decommissioned.

WO39 is directly adjacent to the historic Old Worcester Road Tip, and on Principal aquifer so contaminated land aspects and potential landfill gas risks should be considered.

STC002 and P58a are located on/adjacent to the Stanmore Industrial Estate and on Principal aquifer. P58a is located on SPZ3. Contaminated land aspects including appropriate surface water management will need consideration.

ALV009 is adjacent to groundwater springs/issues, so groundwater is likely to be shallow. Contaminated land, foundation dewatering and surface water management aspects will need consideration.

Morville Quarry Extension

The site is underlain by sands and gravels and till deposits which are in turn underlain by the Raglan Mudstone.

There are a number of potentially adverse impacts that could arise due to the proposed activities. These aspects require full consideration. A water features survey would have to be undertaken to identify any wells, springs, boreholes, watercourses, pools or other water dependent features. The removal of the superficial deposits has the potential to adversely impact upon the quality or quantity of water supplying such features. The site is in close proximity to a watercourse. It would be necessary to demonstrate this will not be adversely impacted by the proposals as it may be sensitive to any water level changes/reductions in aquifer storage.

Therefore a detailed conceptual model of the area (based on site specific geological and monitoring information of at **least 1 year** in duration to establish baseline data and characterisation of the site before work commences) would have to be devised to assist in the assessment.

Any subsequent discharge from the site would have to be controlled and of a sufficient quality not to result in adverse impacts.

Ensuring appropriate restoration measures are also key in terms of protecting water resources. Restoration will require an appropriate environmental permit. Dual-tracking of the planning and permitting process for mineral sites is advisable (See <https://www.gov.uk/guidance/waste-recovery-plans-and-permits>).

In the event that sufficient information is provided to demonstrate that the above potential impacts are unlikely/can be mitigate; we would require a long term monitoring scheme (which shall be in full force for the duration of operations) is put in place to ensure that any potentially adverse impacts (risk of deterioration to the groundwater/water features) are identified. We would require the applicant to investigate the cause of deterioration; remediate any such risk and monitor and amend any remedial measures.

Church Stretton

ELR078 is in close proximity and potentially within the zone of uncertainty of the defined SPZ. The presence of the SPZ would have serious implications in terms of land use constraints etc. The sources are particularly sensitive as the boreholes take water from not only the underlying solid rocks but also the shallow highly permeable sands and gravels within the valley. Consequently any surface pollution could pass rapidly to the groundwater system and potentially the abstraction boreholes. This would therefore be of significant concern. This is exacerbated by the fact that the groundwater is at an extremely shallow depth. Issues of concern would be the land use, surface water drainage, foul drain runs, fuel infrastructure, foundation design and any pre-existing contaminated land issues.

CSTR019 is adjacent to groundwater springs/issues and surface watercourse, so groundwater is likely to be shallow. Contaminated land and surface water management aspects will need consideration.

Craven Arms

The preferred sites overlie highly permeable sand and gravel deposits. The groundwater levels are also shallow. These superficial deposits have previously been used for public water supply, so are relatively high yielding. They will also provide baseflow to the River Onny. Appropriate development design and location (including dewatering of foundations, surface water drainage and pollution prevention measures etc) will therefore be essential in this area.

Ellesmere

Ellesmere is underlain by complex sequence of superficial deposits comprising clays, silts, sands and gravels. This is in turn underlain by the Permo-Triassic Sandstone. The sandstone is of regional strategic importance in terms of water supply and more local scale water requirements and baseflow to watercourses can arise from the superficial deposits. The depth to groundwater across the area is highly variable with shallow groundwater systems present within the shallow drift deposits.

Therefore consideration of appropriate development design (including dewatering of foundations, surface water drainage and pollution prevention measures etc) will be required.

Cockshutt, Dudleston Heath, Tetchill, and Welsh Frankton – need to ensure adequate foul drainage and water supply. The protection of existing private supplies is also of importance as there are a number across these villages. In addition, a number of these locations groundwater levels are known to be shallow and discharge of foul effluent to ground may not be appropriate.

Ellesmere Wood Lane Quarry proposed extension

The site is underlain by a complicated sequence of superficial clays, silts, sands and gravels. It is likely that there will be multi-level groundwater systems present. The current activities require de-watering of excavations to win the sands and gravels. There are a number of potentially adverse impacts that could arise due to the proposed activities (primarily any de-watering and the act of excavation potentially passively draining any perched groundwater systems). These aspects require full consideration.

A water features survey would have to be undertaken to identify any wells, springs, boreholes, watercourses, pools or other water dependent features. Records indicate that there are a number of private supplies in the area. The removal of the superficial deposits has the potential to adversely impact upon the quality or quantity of water supplying such features.

The site is in close proximity to Colemere and a number of protected species/local wildlife sites including deciduous woodland. There is also an area of peat to the east of the proposed extension. It would be necessary to demonstrate that these features would not be adversely impacted by the proposals as they could be highly sensitive to any water level changes/ reductions in aquifer storage. A detailed conceptual model of the area (based on site specific geological and monitoring information of at **least 1 year** in duration) would have to be devised to assist in the assessment.

There is the potential for any impacted groundwater beneath landfilled areas to be mobilised by the proposals.

Any subsequent discharge from the site would have to be controlled and of a sufficient quality not to result in adverse impacts.

Ensuring appropriate restoration measures are also key in terms of protecting water resources. Restoration will require an appropriate environmental permit. Dual-tracking of the planning and permitting process for mineral sites is advisable (See <https://www.gov.uk/guidance/waste-recovery-plans-and-permits>).

Only when such issues have been considered can the acceptability of the proposals be fully assessed. However there are clearly a significant number of potential constraints on the proposals.

In the event that sufficient information/certainty is provided to demonstrate that the above potential impacts are unlikely/can be mitigate; we would also likely require a long term monitoring scheme (which shall be in full force for the duration of operations) is put in place to ensure that any potentially adverse impacts (risk of deterioration to the groundwater/water features) are identified. We would require the applicant to investigate the cause of deterioration; remediate any such risk and monitor and amend any remedial measures.

Ludlow

Burford – BUR002, records show presence of a borehole. This will need to be appropriately decommissioned.

Onibury – ONBY003 - overlies highly permeable sand and gravel deposits. The groundwater levels are likely also shallow. Appropriate development design and location (including dewatering of foundations, surface water drainage and pollution prevention measures etc) will therefore be essential in this area.

Market Drayton

ELR023/024, MDR034 and MDR12 are on Helsby Sandstone or Chester Sandstone Formation. It is also partly located within SPZ3. There is a surface water course in the vicinity and groundwater is likely to be shallow. Appropriate land use, mains foul drainage, surface water drainage design and pollution prevention measures would therefore be required.

MDR039/043 – there is potentially a private water supply in the vicinity which if in use will need to be protected. Appropriate land use, mains foul drainage, surface water drainage design and pollution prevention measures would therefore be required.

Hinstock - HIN009 and HKW009 are located on the Permo-Triassic sandstone (principle aquifer) within SPZ3. Groundwater is shallow. Appropriate land use, dewatering of foundations, mains foul drainage, surface water drainage design and pollution prevention measures will be required.

Minsterley

Minsterley – both MIN007 and MIN018 are adjacent to spring/surface watercourses. Groundwater is potentially shallow, so foundation dewatering and surface water management aspects will need consideration.

Much Wenlock

MUW012VAR falls within SPZ2/3. Appropriate land use, mains foul drainage, surface water drainage design and pollution prevention measures will be required.

Oswestry

ELR043e and ELR072, are located on mixed drift overlying the Permo-Triassic sandstone within SPZ3. Given the scale of the development appropriate mains foul drainage, surface water drainage and pollution prevention measures will be required.

Kinnerley – KNY002 - depth to groundwater is likely relatively shallow so foundation dewatering and surface water management aspects will need consideration.

Knockin – KK001 and KCK009 fall within the SPZ3 of a public water supply borehole. The depth to groundwater is likely to be shallow. There are also a number of private supplies. Given the sensitive hydrogeological setting appropriate drainage solutions will be required, foundation dewatering will need to be considered and we would discourage the proliferation of non-mains foul drainage.

Maesbrook - depth to groundwater is likely to be shallow. There are also a number of private supplies. Appropriate drainage solutions will be required and foundation dewatering will need to be considered and we would discourage the proliferation of non-mains foul drainage.

Ruyton XI Towns – located within SPZ3 of a public water supply borehole. Shallow groundwater is probable. Dairy/industrial former site use, so contaminated land considerations. Appropriate land use, mains foul drainage, surface water drainage design and pollution prevention measures would therefore be required.

St Martins Former mining area so there may be ground contamination/stability issues that will need to be addressed. Given the proposed scale of the development mains foul drainage will be required.

West Felton - within the SPZ3 of a public water supply borehole. The depth to groundwater is likely to be relatively shallow. There are also a number of private supplies. Appropriate land use, mains foul drainage, surface water drainage design and pollution prevention measures would therefore be required. Foundation dewatering will need to be considered.

Weston Rhyn – WRP001VAR adjacent to springs/issues and surface water course. So groundwater is likely to be shallow. Foundation dewatering and surface water management aspects will need consideration.

Whittington - Located within SPZ3 of a public water supply borehole and shallow groundwater in places. Given the proposed scale of the development mains foul drainage will be required. Foundation dewatering and surface water management aspects will need consideration.

Shifnal

The proposed development sites overlie sand and gravel deposits which in turn overlie the Permo-Triassic sandstone. These form a strategically important source of public water supply.

SHIF004a & 4b, SHIF006, SHF022&23, SHF029 and SHF015 fall within SPZ3; ELR021 falls within SPZ2. Groundwater levels are relatively shallow at 5 to 10m bgl. It is therefore essential that appropriate land uses, drainage design and pollution prevention measures are adopted. This is particularly important for the employment site where a potentially wide range of activities may be proposed. The mains foul drainage infrastructure will have to be sufficient to support the development proposals.

Employment land parcels SHF018b and 018d overly the PWS abstraction and associated SPZ1. Appropriate foul and surface water drainage design and pollution prevention measures will be required. Early consultation with the water utility provider as Key Stakeholder will be essential in order to prevent delays to development planning process. Within SPZ1 the Environment Agency will object to certain land uses

Shrewsbury

SHR177 and SHR057 are located within SPZ3. Therefore it will be necessary to ensure appropriate mains foul drainage and surface water drainage.

SHR054a is adjacent to a number of private water supplies and close to a spring/issues. Therefore drainage design and pollution prevention measures will be required.

Baschurch - A number of private water supplies are recorded in the area, consequently given the size of the proposed development appropriate mains foul drainage will be required.

Bicton – BIT022 located within SPZ3 and is adjacent to a well. Therefore it will be necessary to ensure appropriate mains foul drainage and surface water drainage.

Ford - FRD011 falls within SPZ2/3 of a public water supply source. Consequently the hydrogeological setting is highly sensitive. It is therefore essential that appropriate land uses, drainage design and pollution prevention measures are adopted.

Nescliffe - NESS004 located in SPZ3 of a public water supply source and groundwater is relatively shallow. It will therefore be necessary to ensure appropriate foul (mains) and surface water drainage are provided.

Gonsal Quarry Extension

The site is underlain by sands and gravels which are in turn underlain by the Carboniferous Salop Formation.

There are a number of potentially adverse impacts that could arise due to the proposed activities. These aspects require full consideration.

A water features survey would have to be undertaken to identify any wells, springs, boreholes, watercourses, pools or other water dependent features. Records indicate that there are a number of private supplies in the area. The removal of the superficial deposits has the potential to adversely impact upon the quality or quantity of water supplying such features.

The site is in close proximity to a number of local wildlife sites/protected species such as deciduous woodlands. It would be necessary to demonstrate that these features would not be adversely impacted by the proposals as they could be highly sensitive to any water level changes/reductions in aquifer storage. A detailed conceptual model of the area (based on site specific geological and monitoring information of at least 1 year in duration) would have to be devised to assist in the assessment.

Any subsequent discharge from the site would have to be controlled and of a sufficient quality not to result in adverse impacts.

Ensuring appropriate restoration measures are also key in terms of protecting water resources. Restoration will require an appropriate environmental permit. Dual-tracking of the planning and permitting process for mineral sites is advisable (See <https://www.gov.uk/guidance/waste-recovery-plans-and-permits>).

Only when such issues have been considered can the acceptability of the proposals be fully assessed. However there are clearly a significant number of potential constraints on the proposals.

In the event that sufficient information is provided to demonstrate that the above potential impacts are unlikely/can be mitigate; we would require a long term monitoring scheme (which shall be in full force for the duration of operations) is put in place to ensure that any potentially adverse impacts (risk of deterioration to the groundwater/water features) are identified. We would require the applicant to investigate the cause of deterioration; remediate any such risk and monitor and amend any remedial measures.

Wem

Shawbury - SHAW004 and SHA019 groundwater is relatively shallow within the superficial deposits and there are a number of ponds/spreads, springs and watercourses in the vicinity. There is the potential for contamination issues associated with adjacent land uses which should be considered prior to development. Mains foul drainage should be adopted and the surface water drainage should also be carefully designed as there are a number of private water supplies in the immediate vicinity.

Whitchurch

Ash Magna – ASHP002 Mains foul drainage should be adopted and the surface water drainage should also be carefully designed as there are a number of private water supplies in the immediate vicinity.

Clive Barracks

Given its history contaminated land aspects will need consideration. Appropriate land uses, drainage design and pollution prevention measures will be required.

Former Ironbridge Power Station

Given its history contaminated land aspects will need consideration. Appropriate land uses, drainage design and pollution prevention measures will be required. We are currently reviewing information to inform a number of planning applications at this location.

RAF Cosford

The site lies within the SPZ2/3 of the Cosford, Hellbank and Neachley public water supply boreholes. Appropriate land uses, drainage design and pollution prevention measures will be required.

Being an active MOD site/airfield there is a strong likelihood of land contamination issues across parts of the site. The effects of groundworks/development in liberating and mobilising contaminants should be of particular consideration with regard to risk to the public water supply boreholes. We advise the inclusion of land contamination risk assessments and remediation plans as a pre-requisite to drainage design such that early resolution of related issues informs the site layout and drainage planning process. It will also give developers the certainty for any remediation costs and timescales.

Given the site history, consideration should be given to detection and assessment of potential (chlorinated) solvent dnapl plumes (e.g. aircraft maintenance activities) and also per- and polyfluoroalky substances (e.g. firefighting activities).

.....

Q6. If your representation is seeking a modification to the Regulation 19: Pre-Submission Draft of the Shropshire Local Plan, do you consider it necessary to participate in examination hearing session(s)?

Please note that while this will provide an initial indication of your wish to participate in hearing session(s), you may be asked at a later point to confirm your request to participate.

- No, I do not wish to participate in hearing session(s)
- Yes, I wish to participate in hearing session(s)
(Please tick one box)

Q7. If you wish to participate in the hearing session(s), please outline why you consider this to be necessary:

We would look to submit written representations but may wish to attend a particular hearing session.

(Please continue on a separate sheet if necessary)

Please note: The Inspector will determine the most appropriate procedure to adopt to hear those who have indicated that they wish to participate in hearing session(s). You may be asked to confirm your wish to participate when the Inspector has identified the matters and issues for examination.

Signature:	<table border="1"><tr><td>M. Davies</td></tr></table>	M. Davies	Date:	<table border="1"><tr><td>22/02/2021</td></tr></table>	22/02/2021
M. Davies					
22/02/2021					

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	Part B Reference: