1.) Why does the scheme not include a fence? If water is stored people could fall in?

The area of land proposed to contain the scheme is currently open and accessible and the inclusion of a fence would limit this and have a significant negative visual impact on the site.

As landowners, conversations are ongoing with Braintree regarding the specifics of the design and inclusion of any life rings, signage or other safety equipment will be included in line with their requirements. We will include these as part of the construction once finalised.

The bund slopes are 1:3, with some of the attenuation area slopes being 1:6, which are safe to walk over and have no steep drops, reducing the risk of slips or falls.

2.) Who will maintain the scheme following construction?

As landowners Braintree District Council will own and maintain all aspects of the scheme, including the bund, attenuation area, weir, inlet channel and outlet pipe. Braintree have commented on the designs to ensure maintenance is possible and the designs changed to ensure doing some is feasible and financially viable.

A formal agreement outlining ownership and maintenance has been drafted and is currently being discussed ready for formal agreement should planning permission be granted.

A full structural inspection of the entire scheme will be conducted at least once per year by Essex County Council to ensure it remains fully functional.

Trash screens will be maintained by the owners of the land on which they are placed. The design of these is ongoing and the number of screens required will finalised shortly as it is still being calculated whether two or three screens will provide most benefit. The existing trash screen, which we may modify, will continue to be maintained by Anglian Water. This aspect is not covered in the planning application as it can be constructed under permitted development, and is likely to be pursued whether planning permission is granted or not.

3.) Who will operate the weir?

The weir requires no manual operation and will consist of solid boards laid across the channel which are locked into position to prevent destruction or tampering. The number of boards dictates the height of the weir and when water will flow into the spillway, and this can be adjusted depending on how often the spillway is triggered. Essex County Council and Braintree will monitor the weir for at least 12 months after construction and undertake any board changes as appropriate.

4.) The scheme is in the wrong place and won’t solve the flooding problem

An option optimisation study was completed for the area which investigated undertaking the following options;
1. Do nothing
2. A bund and storage area west of Williams Drive
3. A flood storage area west of the junction of Queens Road and Colnailhurst Avenue
4. Swales along Coldnailhurst Avenue and north of Beech Avenue
5. A bund across the open green space west of Rana Drive

The current proposals (Option 2) were found to be the most financially viable way of reducing flood risk to the highest number of properties. The report has been included as supporting documentation in the planning application submission.

An option to upsize or improve the existing surface water drainage network downstream of Friars Lane was not formally considered as this is an Anglian Water asset and similar options in other schemes have not been viable due to extremely high costs.

It should be noted that the proposed scheme is only designed to protect properties or reduce risk to Williams Drive, Friars Lane, Woolpack Lane, Bradford Street, Philips Chase, Kingfishers Gate and River Mead. The scheme has been designed based on both modelled and recorded flooding incidents.

It should also be noted that the scheme is only designed to reduce the risk of flooding from surface water. The scheme will provide no protection for foul flooding or highway flooding, though both may have received an indirect reduction through the scheme reducing water reaching the area. All reports of non surface water flooding received at the consultation have been passed on to the relevant organisations.

5.) Is the scheme being installed to help with future development in the area?

No. All flood schemes we design and build take no account of any future developments and no schemes we construct should be used to support, promote or justify a proposed development. The scheme that has been designed has been informed by modelled and recorded flood risk and will solely exist to reduce flood risk to existing local properties.

6.) The scheme has a drain down time of 24 hours, is this correct? Does water need to be pumped in and out of the attenuation area?

The drain down time is correct. When completely full the storage area will drain in under 24 hours, if half full then it will drain in under 12 hours. It has been designed specifically to do this so it can provide flood benefits whilst becoming operational again quickly and minimising the time for standing water to be present.

No pumps or pumping will be undertaken, all flows throughout the proposed scheme will occur through gravity.

7.) Why haven't local newts, frogs, owls and bats been taken account of?

We have undertaken an independent high level desk based ecological study to help inform initial designs and an independent detailed ecological study, involving a full site inspection,
to inform detailed designs. No significant observation or impact to protected species were noted, and the full high level report was included as supporting information in the planning application submission.

A nearby area of newt and frog presence has been identified, though no works are proposed in this area and the area of works are of significant distance to not negatively impact it.

8.) Has account been taken of the noise created by the discharge pipe?

A chamber will be constructed half way between the attenuation area and where the pipe outfalls into the watercourse. This is due to a change in direction but will also be stepped to create a silt trap. The changes in levels and direction will dissipate both flows and noise from the water draining from the attenuation area.

Erosion protection will be installed at the outlet further reducing noise and it is anticipated that the noise levels will be no greater than existing flows within the stream. It should also be noted that flows will only occur following the attenuation area activating, and for up to 24 hours depending on how full the area becomes, so the outlet pipe will not become active very often.

9.) Why was the engagement event scheduled for after the close of public consultation?

The timing was unfortunate, however representations can be made to the planning department at all times during the planning application decision process. Public notices were also put up in the area to inform of the proposals as well as it being publicised in a local newspaper, as required. Contact details for Essex County Council staff working on the proposals have been provided so that direct communications could be made outside of the event.

10.) Will the scheme increase the risk of flooding to properties?

No. The proposals have been designed to only reduce local flood risk and the only area that will experience increased flooding is within the designed attenuation area itself. Modelling has been undertaken to both design the scheme, calculate the benefits and confirm no increase in local flood risk. It is a planning requirement than no works of any kind increase local flood risk and applications can be refused if they do not adequately demonstrate this.

11.) I get flooded from a pipe/sewer/road. Will the scheme help me?

The scheme has been designed to reduce the risk of flooding from surface water only, however by storing water upstream it will reduce the amount of water in the downstream system during a time of flood. As such there may be an indirect benefit to other flood sources from the proposed works.

All reports of non surface water flooding received by us have been passed on to the relevant authorities for further investigation.
12.) Is a section of hedgerow being removed?

Yes, unfortunately a 15m length of hedgerow towards the north of the works area needs to be removed to allow the new path to be installed. Ecological and arboricultural studies have shown no issues with doing so providing it is replaced north of the new path, which we intend to do. Consultation has been undertaken with Braintree District Council throughout the design process and the area will be seeded with wildflowers following completion to provide an increase to local amenity and biodiversity.

13.) The ditch west of Williams Drive does not function correctly and there are flows reaching this from the north which the scheme will not capture.

We are proposing to change the outlet pipe of this ditch as part of the works as we have observed it is too high and does not function correctly.

We will discuss the comments on the ditch further and will likely add in additional works to the tender process stage, such as re-grading the ditch, to ensure it functions properly and can capture the water from the north.

14.) Will the bunds encourage motorbike activity in the area?

Unfortunately sloped areas can prove attractive to those with motorbikes. The scheme design is such that it functions as a flood storage area and we are continuing discussion with the landowners, Braintree District Council, to meet any requirements they have to install measures to minimise the likelihood of this occurring. On other schemes these have taken the form of placing logs to prevent vehicle access to the bund tops, or the installation of new gates and styles to restrict vehicular access to the whole site.

For additional information or clarification, addition queries, or to request a site meeting to discuss the proposals, please contact;

Tom Palmer
Project Design Engineer
03330 139511
tom.palmer@essex.gov.uk