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Defra Floods Casework Team
Nature and Place Based Solutions Team
Flood and Coastal Erosion Risk Management
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By e-mail FloodsCasework@defra.gov.uk

Dear Sir/Madam

**Application by the Environment Agency
Section 17 River Medway Flood Defence Act 1976**

We act for Lord De L'Isle, the Trustees of the Penshurst Settled Lands Trust and the Executors of the Right Honourable William Philip Viscount De L'Isle's estate.

Our clients are the proprietors of land and buildings referred to for the purpose of this letter as the Penshurst Place Estate or the Estate. We enclose at Appendix A, a plan showing the full extent of the component parts of the Penshurst Place Estate.

We write in response to the application submitted by the Environment Agency ("the EA") to the Secretary of State pursuant to Section 17 of the River Medway (Flood Relief) Act 1976 ("the 1976 Act" to amend the approved 'Scheme' for the operation of the Leigh Flood Storage Area ("the Application").

For the reasons set out below our clients **object** to the Application.

Our clients fully support the EA's efforts to safeguard against the risk of flooding further downstream. However, they are concerned that:

- a. there are significant errors and omissions comprised within the technical analysis underpinning the Application;
- b. the potential impact of the revised Scheme on the operation of the Penshurst Place Estate has been significantly understated; and
- c. no satisfactory mitigation or accommodation works have been proposed to address the risk to the Penshurst Place Estate and its occupiers.

1. Status of the Penshurst Estate for the purpose of the Application

The 1976 Act authorised the Southern Water Authority to operate a flood storage area to control the flow of the River Medway when considered necessary to prevent, alleviate or otherwise control floods (s17 1(a)) ("the Flood Storage Area"). The EA is the statutory successor to the Southern Water Authority for the purposes of the 1976 Act.

The 1976 Act operates to permit the EA to hold and store flood water behind an embankment across the River Medway at Leigh within the Flood Storage Area. A control structure with sluice gates enables the EA to control the flow of the river and allows the EA to release the held water when the flooding subsides.

The River Medway runs through the Penshurst Estate and a significant proportion of land within the Flood Storage Area falls within the Penshurst Place Estate boundaries.

Section 17(3) (a) of the 1976 Act requires the EA to operate the sluice gates in accordance with the provisions of a "Scheme" to be made by the EA and approved by the Secretary of State.

The Scheme is required to include provision for the minimum flow rate below which the gates shall not be operated, the maximum level or quantity of water to be retained in the flood storage area and the rate of flow to be discharged into the river from the sluice gates.

Section 13(3) (c) (d) and (e) of the 1976 Act enable the EA to seek to vary or replace the approved Scheme but require the EA to notify various specified bodies including any persons whose interests are "likely to be substantially affected by the replacement Scheme". Such persons are defined as "specified interests" under the 1976 Act.

For the purpose of the 1976 Act the EA has acknowledged that the Penshurst Place Estate represents a "specified interest". As such the EA has supplied our clients with a copy of the Application and the proposed replacement Scheme.

Section 17(3) (f) empowers the Secretary of State to approve the revised Scheme but provides that where representations are made to him within one month of the date on which the Scheme was submitted and those representations have not been disposed of he shall cause a local inquiry to be held.

This letter represents the Estate's representations for the purpose of Section 17(3) (f) of the 1976 Act.

2. Overview of the Penshurst Place Estate

The Penshurst Place Estate comprises approximately 2,500 acres. The Grade 1 listed main house dates from 1341 and the Estate has been owned by the Sidney family since 1552.

The Estate includes four main ownership elements.

First, the Penshurst Operating Partnership. This includes the main house and gardens, 10 residential properties, 13 commercial properties and a village shop.

The main house and gardens operate 363 days per year. They are hired for weddings, as a filming location and for other events. In addition to the main house and gardens, there is an adventure playground, woodland trail, a gift shop, café and restaurant.

Approximately 80,000 day visitors visit the house and gardens every year, whilst the gift shop and cafe are heavily used by walkers, cyclists and local residents not visiting the gardens. In addition 25,000 visitors attend weddings and other organised functions.

Second, the Penshurst Property Partnership, which includes 43 residential and 5 commercial properties including a nursery school.

Third, the Penshurst Place Maintenance Fund which incorporates two residential properties.

Finally, the Penshurst Settled Lands Trust which represents the remainder of the Estate, including farmland (let out under farming business tenancies), woodland and various estate roads.

Within that part of the Estate which falls within the Flood Storage Area is an estate road known as the Concrete Road – shown coloured blue on the plans at Appendix A. The Concrete Road is on the Regional Cycle Route 12.

The Concrete Road provides access from the public highway to the house and gardens visitor entrance, the Estate Gift Shop and Cafe as well as for wedding and events.

The Concrete Road also provides access to 11 residential properties and the nursery. In times of flooding this is the sole access to these properties.

3. Errors and Omissions comprised within the Application

The Application seeks to amend the existing Scheme to increase the maximum stored water level within the Flood Storage Area from 28.05m AOD to 28.6m AOD.

Our clients do not consider that the Application has properly assessed the impact of the increased storage levels on the Estate.

First, there is an inconsistency within the EA's own analysis.

At page 21 of the Application, the EA asserts that *"the anticipated maximum flood water levels will not increase near Penshurst Place as a result of the Revised Scheme"*.

However, this conclusion is inconsistent with Section 4.1 at page 23 of the Application which states that:

"Modelling shows that the FSA adds approximately 0.1m in depth to the natural floodwater level to land around Penshurst."

This inconsistency undermines the confidence that can be placed on the EA's overall conclusions.

Second, prior to the submission of the Application, the Estate instructed WSP to engage with the EA and its consultants to enable it to properly understand the impact of the amended Scheme on the Estate.

Following their instruction, WSP reviewed the proposals and sought to engage with the EA and its advisors from September 2019 in order to properly assess the impact on the Estate.

WSP raised a number of issues and sought clarification on a number of points from the EA regarding the proposed modelling the EA had undertaken. As a result of these discussions it became apparent that:

- i. The original model was focused on flood storage immediately behind the barrier rather than at Penshurst;
- ii. The EA had used flow rates from 2017 rather than the recorded peak flood event in 2013, which would have been more appropriate in order to assess a worst-case scenario, the analysis shows significant differences in the inflow characteristics of the models used and much lower peak inflows to the model than earlier recorded events;
- iii. The model had been run assuming a water storage level of 28.395m rather than the proposed maximum permitted impoundment of 28.6m
- iv. The EA had assumed a design life of the Scheme of only 40 years and limited the assessment to a 1 in 75 year design event.

Throughout this dialogue the EA's responses to the issues raised were often inconsistent and contradictory.

WSP has concluded that there is considerable uncertainty in the results of the modelling on which the Application is based particularly at the location of the Estate. This is due to many factors that have not been resolved such as: inflow rates which now appear to be significantly lower than in previous modelling work; model parameters that are linked to the improvement works design life and an operational level based on the cost benefit analysis carried out by the EA rather than the potential risk that occurs at any one location.

The EA has not, to date, satisfactorily demonstrated to WSP that the impact on the Estate has been properly modelled and understood. In turn, WSP's concerns have not been addressed in the Application.

The EA's modelling that underpins its conclusion that the revised Scheme will not result in increased flooding at the Estate is based on an assessment of a 1 in 75-year event. This approach is inadequate and contrary to current flood risk assessment guidance and accepted best practice. WSP's view is that the Application should have properly assessed the 1 in 100 year plus 25% for climate change scenario. This is a requirement of the EA in respect of many planning applications where it is a statutory consultee. No explanation has been provided as to why this modelling has not been presented as part of the Application.

As part of the discussions prior to the submission of Application, the EA's consultants did provide an assessment of the 1 in 100 year plus 25% for climate change scenario. A copy of this modelling is attached as Appendix B.

This assessment indicated that in this scenario there is likely to be an increase of 100mm in flood levels within the Estate, including at the Concrete Road. It also indicates that the Flood Storage Area will extend beyond its current boundaries within the Estate – i.e. more land within the Estate will be flooded as a result of the amended Scheme. Neither of these impacts has been properly acknowledged within the Application material.

Fundamentally, the EA's approach is based on a 40 year design life of the Scheme. WSP consider that this is an inappropriate position to take and that the Scheme should be assessed based on a 100 year plus duration with appropriate climate change allowances.

The Estate's position is therefore that the EA's assertion in the Application that the revised Scheme will not increase water levels at Penshurst has not been substantiated.

Furthermore, the information provided prior to the submission of the Application demonstrates that there is likely to be an increase in the level of flooding at the Estate and in particular at the Concrete Road.

4. Impact upon the Estate and the Concrete Road

The Concrete Road is the crucial vehicular access to many of the component parts of the Estate – including the visitor entrance to the Gardens, Gift Shop, nursery and several residential properties. During flood events this access becomes even more important as the EA closes the other access into the Estate from Ensfield Road.

There is a risk that the Concrete Road will be flooded during the 1 in 100 year plus climate change scenario by up to 100mm. The Concrete Road itself is already raised from the surrounding land. WSP consider there is a risk that water levels on the land immediately adjacent to the Concrete Road would increase by up to 600mm due to the relative difference in ground levels. The EA/Defra guidance on Flooding and Risk (FD2320/TR2) categorises flooding of 600mm as being a 'danger for most'.

There is a defined edge and drop between the Concrete Road and these areas which in circumstances where the Concrete Road is under water (and in particular where the edge of the road is under water) creates a considerable safety risk for drivers.

In practice the road may become impassable and large parts of the Estate, including the main visitor access, gift shop, nursery and several residential properties would become inaccessible.

The Application indicates that under the revised Scheme water could be held in the Flood Storage Area for up to 2 days (an increase from current practice).

A situation where access is restricted to these properties for such a length of time would have a profound and unacceptable impact upon the operation of the Estate and for the occupiers of the individual premises.

National Planning Policy Guidance advises that

“Access and egress must be designed to be functional for changing circumstances over the lifetime of the development.....

Access routes should allow occupants to safely access and exit their dwellings in design flood conditions. Vehicular access to allow the emergency services to safely reach the development during design flood conditions will also normally be required.....

Even low levels of flooding can pose a risk to people in situ (because of, for example, the presence of unseen hazards and contaminants in floodwater.....)

Whilst this guidance applies to planning applications the same principles should be applied to the Application.

The Estate considers that the EA has not adequately demonstrated that safe vehicular access can be provided to all parts of the Estate during the operation of the revised Scheme. There is a very real risk that access to large parts of the Estate (including several residential premises and a nursery school) will be impossible for a protracted period of time, resulting in an unacceptable impact upon the Estate and its occupiers and giving rise to a direct safety risk.

5. Proposed mitigation and discussions with the EA

As set out above the Estate is not, in principle, opposed to the EA's desire to improve the flood defences for settlements downstream.

The Estate has sought to engage in dialogue with the EA to seek to understand the impact of the revised Scheme with a view to agreeing works to the Concrete Road in order to properly mitigate the risk set out above.

Again, National Planning Practice Guidance provides that:

"Proposals that are likely to increase the number of people living or working in areas of flood risk require particularly careful consideration, as they could increase the scale of any evacuation required. To mitigate this impact, it is especially important to look at ways in which the development could help to reduce the overall consequences of flooding in the locality, either through its design...or through off-site works that benefit the area more generally".

In summary the Estate's position is that in order to properly mitigate the risks of the revised Scheme on the Estate and provide surety of access, the Concrete Road needs to be raised by a maximum of 0.9m and appropriately widened. We enclose at Appendix C a drawing showing the works which the Estate considers to be necessary to the Concrete Road.

Whilst a scheme of works to the Concrete Road has been discussed between the Estate and the EA, the EA's position immediately prior to the submission of the Application was that such works were not necessary.

The discussions between the parties were suspended due to the COVID-19 lockdown. The Estate was surprised and disappointed that the EA subsequently submitted the application without further notification to the Estate in circumstances where the discussions had not been concluded.

In the Application itself at Paragraph 21, the EA state:

"the Environment Agency acknowledges that there may be scope to improve access arrangements during a flood irrespective of the source of the flooding. They are working with the landowners to assess options to modify the private road (the Concrete Road) to the residential and commercial households at Well Place Farm and Killick's Bank. These cannot be accessed from the alternative route off Ensfield Road when the FSA is in operation."

In this paragraph the EA appears to be acknowledging the need for works to the Concrete Road to be undertaken but no precise scheme of mitigation has been confirmed within the Application documentation.

The Estate hopes to work with the EA to agree a mutually acceptable scheme of works to adequately mitigate the risk of the revised Scheme.

Unless such a scheme of mitigation can be agreed and secured, the Estate will maintain its objection to the Application.

6. Conclusion

The Application does not properly assess the impact of the revised Scheme on the component parts of the Penshurst Place Estate.

In particular, the EA has not assessed a 1 in 100 year plus climate change event. Such evidence as was provided prior to submission of the Application demonstrates that, contrary to the assertions within the Application itself, the operation of the revised Scheme will result in an increase in flooding at the Estate and in particular over the key access provided by the Concrete Road.

In the event that the Concrete Road is flooded, visitor access to the House and Gardens, the gift shop, café, nursery and several residential properties will be restricted and give rise to a clear safety risk.

The Estate cannot support an Application which does not recognise such a fundamental risk to the component parts of its operation and its tenants.

The Estate hopes that the EA will engage in proper and meaningful discussions with a view to agreeing a mutually acceptable scheme of mitigation works to the Concrete Road.

However, for the purpose of Section 17 (3) (f) of the 1976 Act, unless and until such a scheme has been agreed and legally secured, it will maintain its objection – including at a public inquiry if necessary.

The Estate very much hopes that this will be unnecessary, but this is entirely dependent upon the EA's willingness to acknowledge and address the clear risk to the operation of the Estate.

Yours Faithfully

A handwritten signature in dark ink, appearing to read 'Richard Max', is positioned above the printed name.

RICHARD MAX & CO