WINDSOR RURAL DEVELOPMENT CONTROL PANEL

21 October 2015 **Item:** 5

Application No.:	15/02563/FULL
Location:	Bell Weir Riverside Egham TW20 0AA
Proposal:	Construction of a hydro power scheme consisting of three archimedes' screws and associated infrastructure at Bell Weir (excluding eel pass only)
Applicant:	South East Power Engineering Limited
Agent:	Ms Jennie Baker
Parish/Ward:	Wraysbury Parish

If you have a question about this report, please contact: Vivienne McDowell on 01628 796578 or at vivienne.mcdowell@rbwm.gov.uk

1. SUMMARY

1.1 This application has been submitted by South East Power Engineering Ltd and The Runnymede-on–Thames hotel. This scheme would generate electricity from a renewable source and it is estimated the scheme would provide up to a third of the electricity supply requirements for the Runnymede Hotel's business use.

1.2 The Environment has raised no objection to the scheme in terms of flooding implications or ecological considerations, subject to a number of conditions being imposed. The Council's Environmental Protection Team has considered the applicants' Noise Assessment and has raised no objection subject to conditions being imposed.

1.3 The proposed Archimedes Screw system with its associated works (including the new walk way structure), are considered to be appropriate engineering works within the Green Belt which would preserve openness and would not be harmful to the character of the Green Belt in this locality. The proposed control room building would represent inappropriate development in the Green Belt. A case of very special circumstances has been put forward for the new control room building on the basis that this building is essential for the operation of the Archimedes screw system.

1.4 The proposed Hydro-electric scheme in the context of the existing weir structure, is considered to conserve the setting of the River Thames and there is considered to be no conflict with Local Plan policy N2.

1.5 This scheme has been submitted as an alternative scheme to that approved by Runnymede Borough Council under RU.14/1595. Notwithstanding the applicants' stated intentions to implement only one scheme, it is considered prudent to require the submission of a Unilateral Undertaking and/or to impose a condition to ensure only one of the two schemes is implemented. Legal advice is currently being sought on this matter.

It is recommended the Panel authorises the Director of Development and Regeneration:	
1.	**To grant planning permission subject to securing a mechanism to prevent both this scheme 15/02563 and the Runnymede scheme RU.14/1595 being implemented, and with the conditions listed in Section 10 of this report.**
2.	**To refuse planning permission if a mechanism to prevent both this scheme 15/02563 and the Runnymede scheme RU.14/1595 being implemented, has not been achieved by 21 November 2015 for the reason that this scheme together with the other scheme would have an adverse impact on the Green Belt and amenities of neighbouring properties.**

2. REASON FOR PANEL DETERMINATION

- At the request of Councillor Lenton, for the reason that the proposed installation would

appear to reduce the flow capacity of Bell Weir when river level is high thus causing flooding in Hythe End and elsewhere in Wraysbury.

3. DESCRIPTION OF THE SITE AND ITS SURROUNDINGS

3.1 The application site is at Bell Weir which is on the west side of Bell Weir Lock. The Weir consists of 10 similar gates of approximately 4.5 metres width which stretch across the width of the river. The borough boundary runs through the middle of the weir with the area to the south located within Runnymede Borough. On the opposite (southern) bank of the river runs the Thames Path. The Runnymede hotel is next to Bell Weir Lock on the south side of the river. There is no public path or access along the northern bank of the river. Adjacent to the north bank is a gravel pit and there are residential properties to the east in Ferry Lane and to the west in Hythe End Road. Hythe End pumping station also lies approximately 200m to the west of the application site. Approximately 300 metres to the west is the Runnymede Bridge which supports the A30/M25.

3.2 The site is located within the Green Belt and Flood Zone 3b (functional floodplain).

4. DESCRIPTION OF THE PROPOSAL AND ANY RELEVANT PLANNING HISTORY

History and background

4.1 There have been no previous planning applications for hydro-electric power schemes on this site, within Royal Borough of Windsor and Maidenhead.

4.2 A previous (alternative) scheme within Runnymede Borough's area, was submitted to Runnymede Council in 2014 (Runnymede Ref: RU/14/1595). RBWM was consulted on that application under 14/30027/SMI and 15/30018/SMI (amendments to RU/14/1595). RBWM raised no objection under 14/30027/SMI. Comments were made to Runnymede Council on 15/30018/SMI as follows:

'The Royal Borough of Windsor and Maidenhead requests that Runnymede Borough Council makes certain that the proposal will not impact upon a flood event and make it worse. In particular can the Environment Agency confirm/clarify that if the development had been in place in the 1947 and / or the 2013/2014 flood event that it would not have exacerbated the impact of the flood event upon local residents in Wraybsury Parish and the Royal Borough. There is concern that even if the development is not operational during a flood event that it would be an obstruction in the river that would exacerbate the impact of a flood event. There is also concern about the noise generation and impact on amenities of local residents. The visual impact of the development needs to be carefully assessed in terms of the openness and character of the Green Belt; the setting of the River Thames and on the amenities of local residents.'

4.3 Application RU.14/1595 was reported to Runnymede's Planning Committee on 16th September 2015 and at that meeting members resolved to grant permission. At the time of writing this report the decision notice had not yet been issued by Runnymede Council.

The proposal

4.4 This current application 15/02563, is a cross boundary planning application. The majority of the site including the 3 Archimedes' screws and control room building are with the Royal Borough of Windsor and Maidenhead, with a small part 15 sq metres for the eel pass in within Runnymede Borough Council's area.

4.5 The proposal is similar to the scheme for 3 Archimedes screws adjacent to the site on the Runnymede side of the river reference RU/14/1595 (2014 scheme). It is understood that the Environment Agency requested the applicants to explore different options and this current application is submitted to RBWM as an alternative option. It is understood that for commercial reasons just one scheme will be implemented.

4.6 The application seeks full permission for a hydro electric power scheme consisting of 3 Archimedes Screws, a control building and associated works at Bell Weir submitted on behalf of

Scottish Power Engineering Limited (SEPEL) and the Runnymede-on-Thames Hotel. The scheme would provide a green energy source to the hotel for the hotel's business use. The Energy from the Archimedes screws (turbines) will be supplied by an underground cable to be installed between the weir and the hotel's electric switch located inside the hotel.

4.7 As part of the scheme a 15 square metre eel pass is proposed adjacent to the lock within Runnymede Borough Council's administrative area.

5. MAIN RELEVANT STRATEGIES AND POLICIES RELEVANT TO THE DECISION

Royal Borough Local Plan

5.1 The main strategic planning considerations applying to the site and the associated policies are:

	Green Belt	High risk of flooding	Highways /Parking issues
Local Plan	GB1, GB2, GB3, GB4	F1	T5, P4

5.2 Supplementary planning documents adopted by the Council relevant to the proposal are:

- Interpretation of Policy F1 – Area Liable to Flood

More information on these documents can be found at:
http://www.rbwm.gov.uk/web/pp_supplementary_planning.htm

Other Local Strategies or Publications

5.3 Other Strategies or publications relevant to the proposal are:

- RBWM Landscape Character Assessment - view at: http://www.rbwm.gov.uk/web_pp_supplementary_planning.htm
- RBWM Parking Strategy - view at: http://www.rbwm.gov.uk/web_pp_supplementary_planning.htm
- RBWM Strategic Flood Risk Assessment - view at: http://www.rbwm.gov.uk/web_pp_supplementary_planning.htm

•	National Planning Policy Framework Core Planning Principles Within the overarching roles that the planning system ought to play, a set of core land-use planning principles should underpin both plan-making and decision taking. These twelve principles are that planning should:
•	be genuinely plan-led, empowering local people to shape their surroundings with succinct local and neighbourhood plans setting out a positive vision for the future of the area. Plans should be kept up-to-date and be based on joint working and co-operation to address larger than local issues. They should provide a practical framework within which decisions on planning applications can be made with a high degree of predictability and efficiency;
•	not simply be about scrutiny but instead be a creative exercise in finding ways to enhance and improve the places in which people live their lives;

•	proactively drive and support sustainable economic development to deliver the homes, business and industrial units, infrastructure and thriving local places that the country needs. Every effort should be made objectively to identify and then meet the housing, business and other development needs of an area and respond positively to wider opportunities for growth. Plans should take account of market signals, such as land prices and housing affordability and set out a clear strategy for allocating sufficient land which is suitable for development in their area, taking account of the needs of the residential and business communities;
•	always seek to secure high quality design and a good standard of amenity for all existing and future occupants of land and buildings;
•	take account of the different roles and character of different areas promoting the vitality of our main urban areas, protecting the Green Belts around them, recognising the intrinsic character and beauty of the countryside and supporting thriving rural communities within it;
•	support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change and encourage the reuse of existing resources including conversion of existing buildings and encourage the use of renewable resources (for example, by the development of renewable energy);
•	contribute to conserving and enhancing the natural environment and reducing pollution. Allocations of land or development should prefer land of lesser environmental value, where consistent with other policies in this Framework;
•	encourage the effective use of land by reusing land that has been previously developed (brownfield land), provided that it is not of high environmental value;
•	promote mixed use developments and encourage multiple benefits from the use of land in urban and rural areas, recognising that some open land can perform many functions (such as for wildlife, recreation, flood risk mitigation, carbon storage or food production);
•	conserve heritage assets in a manner appropriate to their significance so that they can be enjoyed for their contribution to the quality of life of this and future generations;
•	actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling and focus significant development in locations which are or can be made sustainable; and
•	take account of and support local strategies to improve health, social and cultural wellbeing for all and deliver sufficient community and cultural facilities and services to meet local needs.

6. EXPLANATION OF RECOMMENDATION

6.1 The key issues for consideration are:

i Flooding implications

ii Impact on the Green Belt and setting of the River Thames

iii Impact on neighbouring properties

iv Highway implications

v Ecology

Flooding implications.

6.2 An Archimedes Screw is a gravity turbine turned by the weight of water pushing into helical flights as it falls to a lower level. The rotational energy is extracted by an electric generator. It is estimated that the scheme would generate around 1,500,000 kwh's of renewable energy per year. The proposed system is to provide over a third of the hotel's electric demand – from a

renewable energy source. In periods where the hotel has a surplus of renewable energy but not used within the hotel business requirements, electricity can be transferred to the national grid for the local area to use. It is estimated that the system should be able to run for 80-90% of the year.

6.3 The 3 Archimedes screws would measure 13m x 4m are proposed in 3 existing bays of Bell Weir nearest to the northern bank of the river. Each existing bay would need to be deepened by 1.5 metres. A new control building measuring 28 sq metres would be located nearest to the river bank and a Larinier type fish pass is proposed in bay 10 – under the new control building. Access to the new control building would be via a new upstream walkway behind which would be incorporate around the Archimedes screw system. An eel pass measuring 15 sq metres is proposed to the east of the existing fish pass (near the lock in Runnymede Borough).

6.4 The Environment Agent has been consulted on the proposal. They advise that they have assessed an application for a hydro power scheme of a similar nature submitted to Runnymede Borough Council under RU.14/1595. The Environment Agency has confirmed that moving the scheme to the opposite bank as detailed within this current application to RBWM, has meant that:

1) The fish pass has become wider and therefore will operate within a much less restrictive water level tolerance.

2)There are less capacity issues due to the scheme replacing one of the half gates.

3)It reduces the risk of scour and undermining the side weir.

4)Construction should be much easier as they may get access from the bank.

5)There will be much less disturbance to waterways staff operations and less risk during construction and during the operational phase.

6)There will be no disturbance to the existing fish pass during construction.

6.5 With regard to flood risk, the Environment Agency (EA) advises that it has reviewed the latest flood risk assessment, dated July 2015 and confirms the results are acceptable. The Environment Agency also adds that the Bell Weir Model review was completed and the EA is satisfied that the modelling was fit for purpose. The EA has reviewed the report accompanying the modelling and is satisfied with the findings in the report. These show that with the additional lowering of the upstream bed level by 200mm, there will be a negligible increase in flow conveyance over the weir structure under the proposed scenario. As such flood risk should not be negatively impacted.

6.6 However, the EA advises that without inclusion of a number of planning conditions the EA advises that the development would pose an unacceptable risk to the environment. The recommended conditions seek to:

- ensure the development is carried out in accordance with the Flood Risk Assessment;

-require the submission of further details for approval by the LPA regarding the detailed design of the fish pass;

-prevent piling or any other foundation designs using penetrative methods, unless express written consent obtained from the LPA.

6.7 The EA advises of the need for an Environmental Permit (for details of the fish and eel passes) and Flood Defence Consent (for works and structures in under, over or within 8 metres of the top of the bank of the River Thames).

6.8 The Archimedes Screws have 3 position heights – Low, Raised and High. For the majority of the time the screws are in the low level position mostly to generate electricity. When water capacity conditions do not facilitate energy generation and the turbines are not running, the Archimedes screws will also remain in the lowered position.

6.9 On a few occasions per year the Archimedes screws will be at the raised level, in the event of high water (i.e. flood), or for maintenance to operate the structure. The applicant advises that records indicate 26 occasions between 1995-2009 where the screws would have needed to be raised.

6.10 The highest lifting position is designed for when the flood levels reach the 100 year flood plus climate change level. The applicants advise that records show this level was not reached between 1995 - 2008. Furthermore, they add that the highest lifting position would not have been necessary for the 2013/2014 floods. The proposed control room building would sit on top of the existing weir structure and would be above the 1:100 plus climate change level.

6.11 The applicants anticipate that the turbine lifting system will be operated to the raised level once a month for a short duration (less than a day). The new automatic sluice gates installed at the entrance to each turbine will be closed during maintenance.

6.12 The applicants advise that the construction method will be finalised once planning permission is granted. The engineering construction works will be undertaken from a floating platform. Piles would need to be dug into the river bed and the turbines would be positioned by cranes. Construction materials will be brought in by barge. However, it is understood there will possibly need to be a construction compound on land either near the river or on land next to the Runnymede Hotel.

6.13 Any such construction compounds which are outside of the application site (outlined in red) or outside of land outlined in blue (on the south side of the river) would need to be the subject of a separate planning application. It is noted that there is no land on the north side of the river outlined in red.

6.14 Policy F1 of the Local Plan states that within the area liable to flood as shown on the proposals maps, or within other areas subject to flooding, development will not be permitted for new residential or non-residential development, including extensions in excess of 30 square metres, unless it can be demonstrated to the Borough Council that the proposal would not of itself or cumulatively in conjunction with other development:

1)Impede the flow of water; or

2)reduce the capacity of the flood plain to store flood water; or

3)increase the number of people of properties at risk from flooding.

6.15 It is considered that the proposed scheme complies with Local Plan Policy F1 since there would be no negative impact on the flood plain. The normal operating procedure for the screws is similar to the existing weir structure and should not affect levels in flood events; neither should the control room building affect flood levels as it will be above the predicted flood levels. It is noted that the existing weir bays (where the screws are to be located) are to be made deeper to which should maintain flood storage capacity and conveyance.

6.16 The site is within flood Zone 3b (functional floodplain) and this proposal is considered to fall within the flood risk vulnerability category of essential infrastructure. Whilst the sequential test is not required for this proposal, the exceptions test would need to be passed.

6.17 Paragraph 102 of the NPPF states that for the exceptions to be passed:

-it must be demonstrated that the development provides wider sustainability benefits to the community that outweigh flood risk, informed by a Strategic Flood Risk Assessment where one has been prepared, and

-a site-specific flood risk assessment must demonstrate that the development will be safe for its lifetime taking into account vulnerability of its users, without increasing flood risk elsewhere, and where possible, will reduce flood risk overall.

Both elements of the test will need to be passed for development to be allocated or permitted.

6.18 It is considered that the proposed scheme passes the exceptions test. Since the scheme would provide wider sustainability benefits to the community, through the generation of electricity from a renewal source, thus reducing the amount of electricity required from non-renewable sources.

6.19 The applicants have submitted a flood risk assessment which the Environment Agency has reviewed. The Environment Agency has raised no objection to the scheme subject to conditions being imposed. There would be no adverse impact on the flood storage capacity or water levels during a flood event. On that basis the LPA is also satisfied that there would be no increase in the number of people of properties at risk from flooding. The LPA is satisfied that both elements of the exception test have been passed.

Impact on the Green Belt and Setting of the River Thames

6.20 The proposed Archimedes screws would each measure 13 metres by 4 metres. The proposed control room building would be 3.9 metres in height, 6.6 metres in length and 4.2 metres in width. The drawings suggest that the walls would be clad in brick. It is noted that the existing control hut near the lock is also a brick structure. The proposed hydro-electric scheme and control room building would be built onto the existing weir structure. There would also be a new walkway around the screws. None of the new structures would be encroach onto the river bank. The lifting and lowering of the screws is undertaken by a series of rams and pulleys. The Archimedes screws, rams and pulleys would not exceed the height of the control room building when in the low or raised positions.

6.21 Policy GB1 sets out the categories of development that are appropriate in the Green Belt.
Policy GB1 of the Local Plan states that within the Green Belt, as defined on the proposals maps, approval will only be given, save in very special circumstances, for

1)The construction of new buildings for the following purposes:

2) Essential facilities for outdoor sport and outdoor recreation, for cemeteries, and for other uses of land which preserve the openness of the Green Belt and do not conflict with the purposes of including land in it;

3)Engineering and other operations and the making of material changes in the use of land which maintain openness and do not conflict with the purposes of including land in the Green Belt.

6.22 Policy GB2 follows on from GB1 and states that permission will not be granted for new development or the redevelopment, change of use or replacement of existing buildings within the Green Belt if it would:

- Have a greater impact on the openness of the Green Belt or the purposes of including land in it other than an existing development on the site;

- Harm the character of the countryside because of:

1)The scale, siting or design of the development of the materials employed; or
2)A material intensification in the level of activity on the site; or
3)A material increase in the scale of development on the site;or
4)The permanent loss of grade 1,2, or 3A agricultural land or of woodlands; or
5)Harm to the residential amenities in the locality; or
6)Conflict with any other policies of the plan.

6.23 Setting of the Thames Policy N2 States:
'The Borough Council will conserve and enhance the setting of the Thames, as defined on the proposals maps and will not permit development which would adversely affect the character and setting of the river in both urban and rural locations. Proposed development will be required to meet the following criteria:

1)The character, height, scale, and bulk of the development respects the water frontage together with adjoining development and land uses;
2)The protection of important views of and from the river.
3)The retention of existing waterside buildings where these are considered to be of merit, especially traditional boatyards;
4)The retention of tree-cover and the conservation of the ecological value of the area, particularly the retention of vulnerable meadow land.
5)Existing public access should be retained and, in appropriate locations, the provision of new public access will be sought.'

6.24 Paragraph 90 of the NPPF advises that certain forms of development are not inappropriate in the Green Belt provided that they preserve the openness of the Green Belt and do not conflict with the purposes of including land in the Green Belt. Included in the list is 'engineering operations'. It is considered that the proposed Archimedes screws and associated works fall within the definition of appropriate engineering works.

6.25 Paragraph 91 of the NPPF states that when located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources.

6.26 Paragraph 95 of the NPPF supports the move to a low carbon future and advises that Local Planning Authorities should actively support energy efficiency improvements to existing buildings.

6.27 Paragraph 98 of the NPPF goes on to advise that when determining planning applications, local planning authorities should not require applicants for energy development to demonstrate the overall need for renewable or low carbon energy and also recognise that even small-scale projects provide a valuable contribution to cutting green house gas emissions.

6.28 Paragraph 89 of the NPPF advises that the Local Planning Authority should regard the construction of new buildings as inappropriate development in the Green Belt. A number of exceptions to this are listed in paragraph 89. However, the proposed control room building would not fall into any of the listed categories.

6.29 Whilst the government position is to support renewable technologies, the appropriateness of the Archimedes screws and associated works within the Green Belt needs to be carefully considered in terms of the impact on the Green Belt. Furthermore, a case of very special circumstances will be required in order to justify approving the new control room building as in principle this it is inappropriate development.

6.30 The Archimedes screws (turbines) and associated works will have some impact on the openness of the Green Belt, but under the terms of Paragraph 90 of the NPPF the LPA needs to be satisfied that they would 'preserve the openness' of the Green Belt. The new turbines will be accommodated within three of the ten existing weir which is a very prominent manmade structure spanning the width of the river in this Green Belt location. The applicant has undertaken a landscape and visual appraisal of the proposal and the LPA is satisfied with its conclusions that there would be minimal impact on the landscape value of this area of the Thames.

6.31 It is considered that the Archimedes screws, and associated structures would be seen as a modification and alteration to part of the existing weir structure. There is no public access to the river bank along the northern bank. The Thames Path runs along the opposite side of the river at a considerable distance away. The proposed Archimedes Screws associated works and the new control room building would not be readily visible from properties along the north bank of the river. It is considered that any additional harm to the Green Belt arising from the proposed development would not be significant.

6.32 The new control building would also be seen in the context of an existing manmade structure against a backdrop of trees and its visual impact would also not be significant. However, as this element of the scheme represents inappropriate development, there needs to be a case of very

special circumstances to overcome the harm through inappropriateness and any other harm, in order to justify the allowing of this development in the Green Belt.

6.33 The applicant has put forward the case that the control room building is essential for the operation of the Archimedes Screws which contributes to the notable benefits the scheme will provide to the wider environment. Furthermore, the building is crucial to the operation of the weir, and must be located in the same vicinity. It is not possible to find an alternative location for the control room building outside of the designated Green Belt. It is estimated that one third of the hotel energy supply will be from this hydro-electric power scheme and during times of excess power this can be transferred back to the grid.

6.34 It is understood that the internal area of the control building has been minimised to the extent that a bespoke internal arrangement will be configured in order to fit all the required equipment inside. The equipment required inside the building would include: 3 control cabinets (each approximately 3800mm x 600mm x 2100mm); 9 hydraulic power units (each 600mm x 600mm), battery backup system; backup generator; work bench; cabinets to store spares, manual handles etc: power distribution panel.

6.35 The hydro-electric scheme would provide renewable energy at a location close to the hotel which will ensure effective transmission of electricity (with minimal loss). Additionally, the package of works will improve the ecological conditions for fish and eels in the River Thames. The scheme occupies only a small part of an existing prominent structure next to the norther river bank which is not accessible to the public. It is therefore considered that these can be accepted as the very special circumstances to outweigh any harm to the Green Belt through inappropriateness.

Impact on neighbouring properties

6.36 Paragraph 123 of the NPPF advises that policies and decisions should aim to:

-avoid noise from giving rise to significant adverse impacts on the health and quality of life as a result of new development;

-identify and protect areas of tranquillity which have remained relatively undisturbed by noise and are prized recreational and amenity value for this reason.

6.37 The existing weir generates background noise. There is also background noise from the nearby M25. The applicants have undertaken a noise assessment and the Council's Environmental Protection Team has commented that the proposal.

6.38 The Noise Assessment submitted with the application considered the noise impact of the development, when operational, on sensitive receptors. The assessment based on BS4142 predicted noise levels emanating from the plant to meet the relevant criterion. The conclusion of the assessment that the predicted noise level will not exceed the background level is acceptable. Mitigation and sound attenuation measures have been detailed in Section 9 of the Noise Assessment. The Environmental Protection Officer advises that these mitigation measures should be subject to a condition to ensure that they are implemented in full and maintained as such thereafter.

6.39 In order to protect the residential amenities of the area. The Environmental Protection Officer also recommends a noise control condition to ensure that the rating level of the noise emitted from the plant shall not exceed the existing background level (measured over the period of operation of the plant and equipment and over a minimum reference time interval of 1 hour in the daytime and 15 minutes at night). The noise levels shall be determined 1m from the nearest noise-sensitive premises. The measurement and assessment shall be made in accordance with BS 4142: 2014.

6.40 Neighbours have raised concern about how the noise levels would be monitored by the Council. Any noise complaints received would need to be investigated by the Environmental Protection Team to see whether there is a breach in the terms of noise conditions or whether there is a statutory nuisance.

Highway implications

6.41 It is understood that the construction works would take place from the river. The applicants advise that there may also be a need for a compound area for storage of materials on land. Such an area has not yet been identified. None of the land to the on the northern bank of the river is outlined in red. It is noted that there is no direct public access to the river bank on the north side of the river. If any such compound is outside of the application red line area or outside of the area outlined in blue (to the south of the river), a separate planning application would be required for this element of the scheme.

Ecology

6.42 The applicants have submitted a Fisheries Impact Assessment, bio-diversity reports and an Extended Phase 1 Habitat Survey. These reports conclude that there would be no disturbance to the habitats of any protected species. The applicants' Fisheries report submitted with the application advises that that the proposed scheme would be of benefit to the site, offering improvements to upstream coarse fish and eel migration whilst having a minimal impact on hydrology with the weir pool.

6.43 The Environment Agency has commented that by moving the scheme to the currently proposed siting, the fish pass can be made wider and will operate within a much less restrictive water level tolerance. The applicants are proposing a Larinier type Fish pass which will improve bio-diversity. They also comment that there will be no disturbance to the existing fish pass during construction. A new eel pass is also proposed within Runnymede Council's administrative area. It is understood that this would be a gravity fed eel pass consisting of channel lined with eel crawling substrate. Channels are typically pre-fabricated or cast in concrete and 200-400mm wide located in areas of low turbulence at slopes of up to 40%. The details of the eel pass are not yet finalised and it is understood this would be dealt with by condition (on Runnymede's corresponding planning application).

6.44 The Council's ecologist has been consulted on the application and any comments received will be reported in the panel update report.

Other considerations

6.45 Neighbours have made the point that this scheme utilises a public asset (River Thames) for commercial gain. The government places great importance on sustainable development and supports moves to a low carbon future. Whilst there would be commercial gain for the hotel in reducing its energy costs in the long term, there would also be a gain to the environment by reducing the need for electricity from a non-renewable source.

6.46 It is acknowledged this application has been submitted as an alternative scheme to that submitted to Runnymede Borough Council in 2014. However, in order to prevent a situation where both schemes are built Section 106 Unilateral Undertaking and or conditions would need to be imposed by RBWM and Runnymede Borough Council. The LPA is currently seeking legal advise as to the best method. Any comments received from the Council's Legal Department on this matter will be reported in the panel update, if available.

7. CONSULTATIONS CARRIED OUT

Comments from interested parties

7.1 A total of 31 occupiers were directly notified directly of the application.

7.2 The applicant advertised this application in the local press (Staines Informer and Windsor & Eton Express) in order to satisfy the requirements of the ownership certificate C, where not all of the land owners are know to the applicant. (There is no statutory requirement for the Local Planning Authority to advertise this application in the local press).

7.3 The planning officer posted a yellow site notice in Hythe End Road on 27 August 2015. There was no statutory requirement for a site notice to be posted

7.4 4 letters were received objecting to the application, summarised as:

Comment		Where in the report this is considered
1.	Flooding concerns. It needs to be determined beyond doubt that there will be no increased flood risk. Concern about reduced flow capacity of Bell Weir when the river is high. Reduced flood storage capacity – from the screws and additional concrete. Detrimental impact on the planned relief channel which goes through the Morris site. The turbines would be next to the flood channel.	See paragraphs 1.2, 6.2-6.19
2.	No evidence put forward on the effect of the screws on the river bed or flow of water. Concern about screws holding back water and causing eddies. Need assurance that boat users will not be adversely affected. The scheme is at odds with the recreational function of the river Thames.	See paragraphs 1.2, 6.2-6.19
3.	Need safe access for eels. The fish in this vicinity are not poor quality – there are good quality specimens. Many fishermen fish here.	See paragraphs 6.4, 6.42-6.44
4.	There is concern about access from the land – during construction.	See paragraph 6.41
5.	It is understood from reports of other Archimedes screws around the country that the promised almost silent running is far from guaranteed and residents complain of 24 hour disturbance. Noise report refers to trees providing protection against noise – but this protection would be very minimal and reduced even further in winter months.	See paragraphs 6.36-6.40
6.	This scheme needs strict monitoring of noise. RBWM does not have the manpower to continually monitor.	See paragraph 6.40
7.	Adverse aesthetic impact on the area. The proposal would appear out of keeping and intrusive. Large control room. Prominent position.	See paragraphs 1.3,1.4, 6.20-6.35
8.	This proposal would utilise a public asset (the River Thames) for commercial gain.	See paragraphs 6.17-6.18, and 6.45

Statutory consultees

Consultee	Comment	Where in the report this is considered
Parish Council	Strong objection: this proposal will put Wraysbury at a severe risk of flooding and noise pollution and would be an overbearing inappropriate development. Wraysbury flooded badly in 2003 and twice in 2014 and these were only 1:20 rather than 1:100 magnitude events. There has been a long-term failure to maintain or improve the national land drainage infrastructure combined with the additional needs of ongoing development. Unfortunately nobody has a duty to maintain conveyance capacity of designated main rivers. The Jubilee River Flood Alleviation Scheme is not a catchment-wide solution. It is just 'a bit in the middle' that protects Windsor, Eton and Maidenhead while dumping un-	See paragraphs 1.1 – 6.46

	attenuated flood flows onto undefended downstream communities at the press of a button. Consequently the flood water arrives earlier and rises more quickly to a higher level. The three new channels and associated works of the proposed Lower Thames Scheme are not only too little and too late, but also may never happen. Finally the stage/discharge charts already exhibit a pronounced 'spike' in flood levels downstream of the Jubilee River confluence. There will be times when Bell Weir upstream reach levels will be raised still further (afflux) due to the proposed development.	
Environment Agency	No objections subject to conditions and informatives.	See paragraphs 1.2, 6.2-6.19 and suggested conditions in Section 10.
The Council's Environmental Protection Team	No objection subject to conditions.	See paragraphs 6.36-6.40 and suggested conditions in Section 10.
Council's Ecologist	Comments awaited. Any comments received in time will be included in the Panel Update.	See paragraphs 6.42-6.44
Highway Comments	Comments awaited. Any comments received in time will be included in the Panel Update.	See paragraph 6.41.

8. APPENDICES TO THIS REPORT

- Appendix A - Site location plan
- Appendix B – General drawings

This recommendation is made following careful consideration of all the issues raised through the application process and thorough discussion with the applicants. The Case Officer has sought solutions to these issues where possible to secure a development that improves the economic, social and environmental conditions of the area, in accordance with NPFF.

In this case the issues have been successfully resolved.

9. CONDITIONS RECOMMENDED FOR INCLUSION IF PERMISSION IS GRANTED.

1 The development hereby permitted shall be commenced within three years from the date of this permission.
Reason: To accord with the provisions of Section 91 of the Town and Country Planning Act 1990 (as amended).

2 The development hereby permitted shall only be carried out in accordance with the approved Flood Risk Assessment (FRA) undertaken by Civil Engineering Solutions Ltd dated July 2015, reference: 150722 CES353 Bell Weir Hydro-electric Scheme Collated FRA.Dox.
Reason: To reduce the risk of flooding to the proposed development and future users. This condition is in accordance with paragraph 103 of the NPPF which states that the development should be appropriately flood resilient and resistant and that any residual risk can be safely managed.

3 No development shall take place until the designs of the fish pass as shown in drawing 105, V15 Bell Weir Site Plan dated 23 July 2015 have been submitted to and approved in writing by the

Local Planning Authority. The scheme shall be subsequently implemented and retained in accordance with the approved details before development takes place.
Reason: The incorporation of the fish pass is fundamental to the biodiversity mitigation in order for this hydropower scheme to be acceptable, in accordance with paragraphs 109 and 118 of the NPPF. This detail needs to be approved prior to commencement to ensure that there is no adverse impact on biodiversity and ecology as a result of the proposed works.

4 Piling or any other foundation designs using penetrative methods shall not be permitted other than with the express written consent of the Local Planning Authority, which may be given for those parts of the site where it has been demonstrated that there is no resultant unacceptable risk to groundwater. The development shall be carried out in accordance with the approved details.
Reason: The site is in a high risk location for the protection of the River Terrace Gravels which are designated a Principal Aquifer and the River itself. The site is underlain by Alluvium over Gravels over London Clay. The weir location is on the edge of source protection zone 3 for Chertsey. The abstractions at Chertsey are from surface water and from the gravel groundwater therefore any contamination of the river or gravels has the potential to impact this abstraction. Piling into the river bed could create a preferential pathway for contamination to reach the River Terrace Gravels Principal Aquifer during works at the site. A piling Risk Assessment should be completed to show that all potential risk has been considered.

5 The noise mitigation measures, as detailed in section 9 of the noise assessment submitted with this application shall be implemented in full and maintained as such thereafter.
Reason: To protect the residential amenities of the area. Relevant Policy Local Plan NAP3.

6 The rating level of the noise emitted from the plant shall not exceed the existing background level (measured over the period of operation of the plant and equipment and over a minimum reference time interval of 1 hour in the daytime and 15 minutes at night). The noise levels shall be determined 1m from the nearest noise-sensitive premises. The measurement and assessment shall be made in accordance with BS 4142: 2014.
Reason: To protect the residential amenities of the area. Relevant Policy Local Plan NAP3.

7 No development shall take place on the construction of the control room building until samples of the materials to be used on the external surfaces of the building have been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out and maintained in accordance with the approved details.
Reason: In the interests of the visual amenities of the area. Relevant Policy DG1, GB2, N2.

8 No development shall take place until details of the finishing materials (including the colour) to be used on the external surfaces of the Archimedes screws and associated structures have been submitted to and approved in writing by the Local Planning Authority. The development shall be carried out and maintained in accordance with the approved details.
Reason: In the interests of the visual amenities of the area. These details are required prior to commencement as these details should be considered at the design stage. Relevant Policy DG1, GB2, N2.

9 The development hereby permitted shall be carried out in accordance with the approved plans listed below.
Reason: To ensure that the development is carried out in accordance with the approved particulars and plans.

Informatives

1 Developers should ensure that all contaminated materials area adequately characterised both chemically and physically in line with British Standards BS EN 14899:2005 'Characterisation of Waste - Sampling of Waste Material - Framework for the Preparation and Application of a Sampling Plan' and that the permitting status of any proposed treatment or disposal activity is clear. If in doubt, the Environment Agency should be contacted for advice at an early stage to avoid delays.

If the total quantity of waste materials to be produced at or taken off site is hazardous waste and is 500kg or greater in any 12 month period the developer will need to register with the EA as a hazardous waste producer. Refer to the EA website at www.environment-agency.gov.uk for more information.

2 Regarding the Environmental Permit : Detailed designs of the fish and eel pass will be required for the permit. The turbines will need to have the usual fish protection measures , i.e. rubber bumpers and limited rotational tip speed.

3 Regarding the Flood Defence Consent: Under the terms of the Water Resources Act 1991, and the Thames Land Drainage Byelaws 1981, the prior written consent of the Environment Agency is required for any proposed works or structures, in under, or over or within 8 metres of the top of the bank of the River Thames, designated a 'main river'. It is understood that this consent has been applied for and will be issued in due course. The EA confirms that an impoundment licence has been issued for this proposal.