

London Borough of Richmond upon Thames
Civic Centre
44 York Street
Twickenham
Middlesex
TW1 3BZ

**By First Class Post and e-mail to: D.Tanner@richmond.gov.uk and
R.Angus@richmond.gov.uk**

Our Ref : JZM/JMC/222328.1
Date : 14 April 2015

Dear Sir

Planning Application 14/3732/FUL - Teddington Weir, Teddington Lock, Teddington ("the Application")

We act on behalf of Lensbury Limited and write in connection with the above Application.

Background

1. The Application was submitted to the London Borough of Richmond upon Thames ("the Council") on 2 September 2014 by Ham Hydro CIC ("the Applicant"). The Application sought planning permission for the following development:

"Demolition of a section of [Teddington] Weir and installation of 3 reverse engineered Archimedean screw turbines to generate hydroelectricity. New Fish and Eel passes, sluice gate [and] cable routes to substation. Adapt maintenance access to that section of weir; plant room to be constructed on walkway" ("Proposed Development").

2. We note that the Application supersedes the application dated 29 November 2011 under reference 11/3908/FUL ("the Previous Application"). The Previous Application sought permission for the same development under the Application, save that the Previous Application included a canopy to be erected above the screw turbines ("the Previous Development"). The Previous Application was formally withdrawn on 9 September 2014.
3. The Council's planning committee intends to consider the Application on 15 April 2015. However, from an initial review of the Application and Committee Report, we consider that any decision to approve the Application would be legally deficient until the following issues are properly addressed and/or considered by the Council.

Viability

4. We note that the Application also seeks permission for cabling works to connect the Proposed Development to the National Grid, via a substation. The Applicant has previously confirmed that they have been *"liaising with the Lensbury Club regarding the need to obtain access to the site and route the main cable from the weir to the substation on Broome Road through the grounds of the club"*.

5. We must reiterate that our client shall not be, under any circumstances, providing necessary consent for such cabling works to be undertaken from their land. Therefore, in the absence of any alternative routing proposed by the Applicant and unless alternative access may be secured, it is clear that the Proposed Development shall not be viable. Limited weight should therefore be attached to the benefits of the scheme; a scheme that for this reason alone is unlikely to ever come forward.

Failure to consider Environmental Impacts

6. The Council should be aware of their duties under The Town and Country Planning (Environmental Impact Assessment Regulations) 2011 ("the Regulations"). In particular, Regulation 7 provides:

"Where it appears to the relevant planning authority that—

- (a) an application which is before them for determination is a Schedule 1 application or a Schedule 2 application; and*
- (b) the development in question has not been the subject of a screening opinion or screening direction; and*
- (c) the application is not accompanied by a statement referred to by the applicant as an environmental statement for the purposes of these Regulations,*

paragraphs (4) and (5) of regulation 5 shall apply as if the receipt or lodging of the application were a request made under regulation 5(1)."

7. Regulation 5 provides:

"A person who is minded to carry out development may request the relevant planning authority to adopt a screening opinion" (Regulation 5(1)).

"An authority shall adopt a screening opinion within 3 weeks beginning with the date of receipt of a request made pursuant to paragraph (1) or such longer period as may be agreed in writing with the person making the request" (Regulation 5 (5)).

8. It is clear that the Proposed Development is a type of development that is listed at paragraph 3 (f) of Schedule 2 to the Regulations, namely *"installations for hydroelectric energy production"*. A screening opinion is therefore required if *"the installation is designed to produce more than 0.5 megawatts"* ("the EIA Threshold").

Inadequate knowledge and clarity of the Proposed Development

9. There is clearly some confusion and uncertainty as to the energy output capabilities of the Proposed Development and whether or not the EIA Threshold has therefore been exceeded.
10. The Committee Report concludes that the proposed Development is likely to generate 0.492MW and thus falls slightly below the EIA Threshold. In 2012 the Applicant confirmed that the likely output was 0.45MW (see e-mail chain between Vincent Gabbe of VGR Consulting and Derek Tanner dated 16 January 2012).
11. On the contrary however, the Applicant's own noise assessment confirms that the likely output shall exceed 0.5MW, which confirmed that the *"anticipated overall power generation is approximately 168kW of power output per turbine with a total of 500kW estimated from the overall installation"*. The Council should note that this calculates to 5.04MW and thus exceeds the EIA Threshold. This is, rather curiously, the only reference in the application documentation as to the proposed output for the scheme.

12. In view of these uncertainties, for the Council to proceed with the determination of the Application without fully understanding the scope of the same would be wrong. In the absence of full and sufficient details of the Proposed Development (and whether or not the Proposed Development is "EIA development"), we consider that any determination of the Application would be irrational and procedurally flawed.

Failure to screen the Application for Environmental Impacts

13. In any event, it is clear that the Proposed Development exceeds the EIA Threshold. Even if the Council ignored the clear discrepancies within the Applicant's own application material and accepted the latest assertion by the Applicant that the scheme was below the EIA Threshold, we note that such conclusions are simply incorrect.
14. We enclose a technical opinion from Paul Johannsen of Thames Renewables who has considered the Proposed Development. This opinion clearly concludes that the Proposed Development is designed, as a matter of fact, to exceed the EIA Threshold.
15. Consequently, there cannot be any doubt that the Application should be screened by the Council pursuant to Regulation 7. We maintain that it is not possible for the Council to ignore these considerations. In the event that the Council determines the Application without full and proper screening of the same under the Regulations, the decision shall clearly be flawed for lack of consideration of environmental impacts.

Inadequate Screening Opinion

16. We note that the Council may wish to rely on the negative screening opinion in respect of the Previous Application dated 23 February 2011 ("the 2011 Screening Opinion"). This approach would be illogical and irrational for the following reasons:

- 16.1. the 2011 Screening Opinion was not undertaken pursuant to the current EIA regulations and thus cannot be relied upon in respect of the Application;
- 16.2. at the time of the 2011 Screening Request it was admitted that the designs were "still evolving". The Proposed Development, once finalised, has not therefore been the subject of screening;
- 16.3. the Application should be subject to a new screening opinion in accordance with the principals set out in the High Court decision of *R (BurrIDGE) v Breckland DC* [2012] EWHC 1102 (Admin). His Honour Judge Waksman QC considered the question of a whether a further screening opinion would be required when a new and revised application had been submitted and stated that:

"had there been a material change to the development which was the subject of any particular application after the screening opinion, it could not be said that "the development in question" now to be considered was not the same as the development which had been screened so that the LPA could conclude that there had been no screening opinion in respect of the current "development in question"."

The Proposed Development differs significantly from the Previous Development. In particular, the Application provides for a new eel pass and the proposed canopy has now been removed.

- 16.4. the 2011 Screening Opinion is out of date. Over 4 years has passed since the 2011 Screening Opinion. It would be irrational for the Council not to undertake a new screening opinion to take into account factors that have arisen since 2011 to include the 2013/14 floods, any change in local landscape and environment and any other development that may have been constructed or permitted in the locality since this date;

Irrational Screening Opinion

17. In any event, notwithstanding the above concerns, it is clear that the Council have acted irrationally when concluding that the development subject to the 2011 Screening Opinion would not lead to likely significant effects on the environment. Indeed we note that the Council has proposed to impose a range of conditions to deal with certain environmental impacts that include noise, ecology, heritage, landscape and flooding amongst others.
18. The imposition of such mitigation measures is illogical and contradicts the conclusions in the 2011 Screening Opinion in that that the scheme is unlikely to lead to likely significant effects on the Environment. The Council should have instead adopted a positive screening opinion in respect of the current application in order for any environmental impacts and proposed mitigation measures to be properly assessed and to ensure that the mitigation measures were appropriate.

Conclusions relating to Environmental Impacts and Inadequate Screening

19. For the above reasons, it is clear that the Council must adopt a screening opinion (and in view of those reports submitted by our client to date a positive screening opinion) prior to the determination of the Application.
20. The 2011 Screening Opinion cannot be relied upon for the current proposals and is, in any event, fundamentally flawed. The Committee Report at paragraph 38 is therefore incorrect to rely upon the same, which is in any event misleading as to its contents.
21. Therefore, we have standing instructions to apply to the Secretary of State for a screening direction pursuant to Regulation 4 (8). This shall confirm, for the avoidance of any doubt, as to whether or not the Proposed Development is likely to have significant effects on the environment and justifies an Environmental Impact Assessment. We shall, of course, provide the Council with a copy of such a request in due course.

Inadequate assessment in accordance with section 38 (6)

Flawed Committee Report

22. For the reasons set out in paragraphs 26 to 36 below, we consider that the evidence submitted in support of the Application is insufficient for the Council to legitimately determine whether or not the Proposed Development is compliant with local and national policy and acceptable in planning terms.
23. This is illustrated by the vagueness and frankly, inadequacy, of the Committee Report. The report fails to show how the Council have properly assessed the scheme against each of the relevant planning policies, namely those contained in the Local Development Framework Core Strategy policies 2009 and the Development Management Plan Policies 2011.
24. Whilst the majority of the relevant policies (although we note not all) have been referred to at pages 5 and 6 of the Committee Report, there is little specific assessment of the Proposed Development against these policies. There is further little (if any) assessment of the relevant policies under the NPPF and the other material considerations that ought to be taken into account before determination of the Application.
25. We are therefore concerned as to how the Planning Committee shall be in a position, based on the Committee Report as presently drafted, to determine whether or not the Proposed Development is a suitable one and discharge their duties under section 38 (6) of the Planning and Compulsory Purchase Act 2004. Any resulting determination of the Application would therefore be flawed.

Deficient Planning Application and Assessments

26. We also fully support those conclusions and concerns detailed in the letter submitted by VGR Planning on 23 October 2014 and the supporting reports below:
 - 26.1. Stephen Levrant Heritage and Architecture dated October 2014 concerning visual and heritage impacts;
 - 26.2. SLR Consulting Limited dated October 2014 concerning ecology and fishery impacts;
 - 26.3. Adrian James Acoustics dated October 2014 concerning noise impacts; and
 - 26.4. HR Wallingford dated October 2014 concerning flood risks.
27. It is clear, from a review of the Application, subsequent correspondence and Committee Report, that the Council has failed to have proper regard to the above reports.
28. In particular, we note that the Proposed Development sits within the Teddington Lock Conservation Area, No 27 designated in 1977. The conservation area is a *"Designated Heritage Asset"* as defined by the NPPF, and also includes two listed footbridges and the boat yard.
29. Paragraph 128 of the NPPF provides:

"In determining planning applications, local authorities should require the applicant to describe the significance of any heritage assets affected, including any contribution made by their setting".
30. Paragraph 129 of the NPPF further provides:

"Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including the setting of a heritage asset) taking into account of the available evidence and any necessary expertise. They should take this assessment into account when considering the impact of the proposal on a heritage asset, to avoid or minimise conflict between the heritage asset's conservation and any aspect of the proposal".
31. No heritage assessment has been submitted as part of the Application. Further, it is clear from the Committee Report that the Council have in turn failed to take proper account of the significance of designated heritage assets and properly considered the impact of the same.
32. For these reasons, although it may be understandable as to why it appears the Council have been unable to properly consider these issues in the absence of proper assessments with the Application, any determination of the Application in the absence of such assessment would be wrong.
33. Further, without the following information we maintain that it would be irrational for the Council to determine the Application as the full impact on ecology remains unknown and uncertain:
 - 33.1. the type and design of the proposed fish pass and its impacts on the wider context of the River Thames (including cumulative impacts in accordance with the guidance published by the Environment Agency in December 2013;
 - 33.2. full details as to the potential impacts on ecology during the construction phase;
 - 33.3. proper assessment of the impact of *"low flow"* conditions;

- 33.4. a fluvial geomorphology assessment in line with Environment Agency guidance to take into account of the 2013/14 winter floods;
- 33.5. assessments of the impact of the Proposed Development on non-aquatic ecology, including European Protected Species;
34. We also maintain that it is irrational for the Council to rely upon the noise assessment conducted by Peter Brett Associates, and flagrantly disregard those conclusions set out in those reports submitted on behalf of our client. The Applicant only relies on data from the hydro turbine installation at Romney Weir, Windsor and presumes that the Proposed Development is the same.
35. This is fundamentally incorrect; the two schemes differ in terms of size, construction, screw design, flow rate and tidal conditions and therefore the Council should require the Applicant to commission a more appropriate assessment before it shall be in a position to legitimately consider if the noise impacts are acceptable.
36. Finally, we also consider that the Applicant (and in turn the Council) have failed to properly assess and have proper regard to the economic impacts of the Proposed Development on the Lensbury Club during the construction and operational phases.

Next Steps

We urge the Council to address the contents of this letter before any decision may be made to grant the Application. It is clear that the Application is required to be screened and further assessments are necessary even before the Council may legitimately determine if the Application is acceptable in planning terms.

Should the Council proceed to grant planning permission without addressing these concerns, or awaiting a screening direction from the Secretary of State, we maintain that the decision would be legally flawed. Indeed the Council should be aware that we have standing instructions to submit a claim for judicial review should the Application be granted without the above issues being properly addressed. In consideration of the fundamental errors in the decision making process to date, we shall seek our costs of any such challenge from the Council.

Yours faithfully



Howes Percival LLP

Direct Dial : 01603 580055
Fax : 01603 632132
E-mail : jay.mehta@howespercival.com

Encs

Vincent Gabbe
VRG Planning Ltd
1 Consero Court
51 Britannia Road
Surbiton
Surrey
KT5 8TT

Planning Application 14/3732/FUL
Teddington Weir, Teddington ("the Application")

13th April 2015

Dear Mr Gabbe

I write in response to a request for advice regarding the energy output of the above proposed hydro-electric development. In particular, you have asked for my opinion as to the likely energy output and rating of the scheme. I set out my response to this question below under relevant headings.

1. My Experience

I write with particular technical expertise of over 50 other Hydro projects including this site (2009). I have been an engineer for over 35 years and lived, worked and navigated the River Thames for 25 years. I have consulted with my peers and other experts in this field and make references to the public record.

2. The Background Documents

In providing this opinion, I have reviewed both of the planning applications submitted in relation to the above development, including the original one dated November 2011 (application reference 11/3908/FUL) and the current application, submitted in September 2014 (application reference 14/3732/FUL). I have also had regard to a range of other legal, policy and guidance documents, including the following:

- Guidance for run of river hydropower development - EA December 2013
- The Feed-In Tariffs (Specified Maximum Capacity and Functions) Order 2010
- The Feed-In Tariffs Order 2012 Schedule A Standard Licence Condition 33
- Renewables Obligation Order 2009
- Feed-In Tariff Scheme: Guidance for Licensed Electricity Suppliers Renewables Obligation: Guidance for generators (May 2011)
- Renewables and CHP Register User Guide (April 2008)
- Feed-in Tariff: "Generating equipment" decision (February 2013)
- Feed-in Tariff: Guidance for Community Energy and School Installations

3. Method of Calculation

It is a long established process and firmly embedded in the regulations and case law that electricity generator ratings that determine which band and tariff applies to renewable technologies be derived according to the following definitions:

Total Installed Capacity (TIC)

This rating is defined in Schedule A to Standard Licence Condition 33 as:

"the maximum capacity at which an Eligible Installation could be operated for a sustained period without causing damage to it were the Energy source available without interruption"

For Hydro power installations this is the maximum continuous rating of the electricity generator that is driven by the gearbox attached to the shaft of the screw turbine were the full flow of water available to it at all the time. The generator rating is a fixed number described on the generator nameplate by the manufacturer of the generator and is usually also the manufacturers continuous rating or MCR.

Declared Net Capacity (DNC)

This rating is defined in Schedule A to Standard Licence Condition 33 as:

"the maximum capacity at which an Eligible Installation could be operated for a sustained period without causing damage to it were the Energy source available without interruption less the amount of electricity that is consumed by the plant."

For Hydro power installations this is always less than the TIC as it is TIC minus the auxiliary and parasitic energy losses of the installation.

Purpose of TIC for Hydro Installations and the Environmental Impact Assessment (EIA) limit of 500kW

The reason for introducing a 500 kW level to trigger the requirement for an EIA to be carried out is that at this scale it is established that any installation is more likely to cause harm were one not to be provided. Furthermore DECC have also determined that OFGEM and the EA shall particularly apply this rule for in river Hydro installations because they have much higher impacts likely to cause harm than PV or Wind installations of a similar size. The specific purpose of an EIA is to ascertain ALL the pertinent impacts that may arise over time that the development may cause. It is a method of identifying and mitigating every aspect likely or possible.

4. Assessment of the Proposed Development

Background

The planning history for the Teddington Hydro Power Scheme describes a generator rating that has been both below and above the higher and lower tariff figure and also the EIA requirement level of 500kW. Closer inspection of the equipment suggests that the TIC is actually above 500 kW. The DNC appears to be marginally below the 500KW level but this is not the rating used by OFGEM to set the higher tariff level or the need for an EIA.

Comparison of the earlier and more recent planning applications

It is noteworthy that the original planning application proposed four turbines, whereas the more recent application proposes three. The four turbines were stated as being over 500 kW TIC but the 3 turbines were only just under 500 kW; although there was a period where the yield was stated as being the same. Further the new application describes much larger screws both in diameter and length but not a corresponding increase in generator rating over and above that originally stated.

It is a common for developers to chase the highest tariff by stating a lower generator output rather than declaring true TIC and this is why the nameplate ratings are used by Ofgem i.e. is it capable of generating more than being stated with no restrictions or control mechanisms and at continuous full flow.

Further reasoning as to the TIC

The applicant has with the manufacturer designed the scheme for maximum yield matching the length, angle and diameter of the screw turbines with the maximum river flow to size a gearbox and generator rating to produce the greatest amount of electricity. The applicant has repeatedly stated in the application that the maximum flow is 9m³ per second for each turbine and produced a range of different annual output figures based on historic flow data. The physical constraints of the applicant's design and considering that it is manufacturer specific permits back working from yield results. The EA has also stated that the tip speed of the turbine cannot exceed 3m/s and the effective head and flow data has all been published.

When working through all the fixed data using industry standard calculations, the applicants output is always higher by a margin range of between +12% (most recent) and + 27% (previous) data published by the applicant. It is also higher than any other project provided by the same manufacturer.

The TIC of the generators to achieve the yield being claimed using historic data sets is between 186 KW and 210 KW per turbine. Consequently the TIC of the project is between 558 KW and 630 KW.

5. Conclusion

In conclusion, the proposed development should have been based on the Total Installed Capacity (TIC) of the proposed hydroelectric development which would have concluded the proposed development has an output of greater than 558 kW and up to 630KW. This would also attract the lower tariff rate and confirm that an EIA is required.

Instead, it appears that the Declared Net Capacity (DNC) has been used by the applicant resulting in a reduced output rating figure being specified in the application material to date. This data has also been published within financial prospectus resulting in a higher tariff and issued to the LBRUT and the EA.

Yours sincerely



Paul Johannsen