

## **Planning Statement**

### **Bellingham Camping & Caravanning Club Site:**

#### **Installation of package treatment plant for campsite waste water management**

Johanna Avis and David Berrisford (Directors, Bellingham Camping Limited).

#### **Introduction**

This application seeks to address a significant problem for the running of our campsite, Bellingham Camping and Caravanning Club Site, situated on the site of the old Brownrigg School, at Brown Rigg near Bellingham in the North Tyne Valley. We propose to make the freehold property more effective in its treatment and disposal of grey and black water waste and more autonomous in its existence. The plan is to install a new package treatment plant for waste water disposal that serves the unique needs of our site (seasonal flow) and meets modern standards of effluent control. In doing so, we will release our business from difficult and potentially insurmountable problems it is facing using the water treatment plant that is currently shared with Brownrigg Lodges next door. The campsite will thus become a more robust business over the coming decades and, more importantly, a significantly more stable tourist accommodation provider in the Bellingham area (the campsite is dependent upon an *efficient* and *accessible* water treatment plant).

#### **The Brownrigg Site: Background Information relevant to waste water treatment**

We purchased the site in 2013 on the understanding that the water treatment plant, shared with Brownrigg Lodges, was fully operational and all connections from our campsite to this plant were agreed. Indeed, for the first 3 years, this shared arrangement worked well, as it had done for previous owners of the campsite since it was established in 1992. However, the shared arrangement for sewage treatment has now become unsatisfactory, for a number of reasons, to the point of also being untenable for the future success of a campsite in this location.

The existing shared treatment plant is an extremely large capacity filter treatment plant dating back to the late 1930s/early40s, with some modifications, repair and, of course, maintenance since. At that time the plant served Brown Rigg School. In 1987, the school was sold by the Council to a private owner, who then divided the approx. 30 acre site into his land (the 'retained land', now known as Brownrigg Lodges) and a 5.5 acre plot which he sold with planning permission from Northumberland County Council to become a 80-pitch touring campsite. The campsite passed through two owners before, in 2006, the third owners franchised the site with the Camping and Caravanning Club and, as a result, achieved success in bringing even more tourists to Bellingham by more effectively filling the caravan, motorhome and tent pitches (even though the number of pitches were reduced to 70, with better separation). Incidentally, the filter treatment sewage plant also increased in effectiveness as, because of its size, it works better with some moderate degree of flow (rather than negligible flow). In 2013, we bought the site and also bought the franchise with the Camping and Caravanning Club. The site is named Bellingham Camping and Caravanning Club site and runs as one of the Club's 105 main UK Club sites. Since our ownership, we have made numerous further improvements to the site and its facilities, increased its energy efficiency (large solar PV array on one of its timber buildings and solar thermal water heating array on another), and we continue to improve its facilities, its aesthetic appeal, and to build up both a substantial returning and renewing customer base, ensuring tourists coming to Bellingham increase in number. The degree to which we have invested capital and staff time in the site over the first 5+ years has resulted in little take-home profit, despite a strong business performance and turnover, but we are close to finishing most major developments and will need to soon focus on raising this profit to improve the valuation of the site. We achieved a higher AA grading (5 Gold Pennants) in 2017 and retained this award in 2018. This grading is for only the best campsites in the UK. In running a tourist business, we are conscience of reaching a point where the property is as attractive as possible for potential future owners and investors in the site, so that the campsite continues to be of major benefit to Bellingham as years progress (currently drawing approximately 6000 visitors per year to the site and to Bellingham). Since change of

ownership of the neighbouring property with whom the water treatment plant is currently shared, difficulties have arisen concerning the shared use that appear to be insurmountable. These are difficulties inherent with a situation where something so major is shared and they could have arisen at any time (past, present or future), though we are the first campsite owners to encounter them. In the current situation, we are no longer able to be directly involved with any maintenance or testing of the system, or monitoring of repairs needed. Nor can we efficiently observe how well (or not) the system is running. Rather than argue about our rigorous policies for controlling effluent from the campsite, it is evident that it now makes sense, despite the cost, to make our land and its occupying business more autonomous by installing a water treatment plant on our land for our use only. To run a business on freehold land without such autonomy is not ideal for the long term health and success of that business, for either us or future purchasers/owners of the site, which has ramifications for sustained attraction of significant numbers of tourists to the Bellingham area. Furthermore, and perhaps more importantly, the current shared system struggles with the seasonal flow it receives from seasonal businesses. The system we install, therefore, needs to accommodate this variation in flow and work efficiently year-round regardless of occupancy.

### **Justification for our proposal**

It would be of undoubted benefit to the campsite to have its own sewage treatment plant. Benefits include:

- Installation of a treatment plant that meets the seasonal flow requirements inherent in a camping business (modern package treatment plants 'recycle' waste to the primary tank in periods of low flow to encourage and maintain bacterial activity and effectiveness of the waste treatment). Seasonal use puts stress on the existing plant, which is not suited to low usage in winter months. The system thus struggles to build up the bacterial colonies again each Spring and can run non-optimally for some months before the bacteria reach efficient levels again. The ability to cope with load fluctuation is a major advantage of modern package treatment plants.
- Modernising the site and ensuring it runs effectively with regards to the management of its waste water treatment for decades to come.
- Empowering us with the ability to fully manage our waste water: As stated, the existing shared filter treatment plant is on neighbouring land, some 150 m away from our property, resulting in lack of 'control' and free access, and ability to assess maintenance and operation of the plant effectively. The manholes we require access to on an occasional basis are also now part of a car park on neighbouring land, increasing our access difficulties should there be any pipe blockages caused by materials that might elude our multiple traps. Furthermore, the treatment plant is very old and it is possible it may require replacement within the next 15-20 years in any case, especially as Environment Agency regulations evolve.
- Establishing more autonomy for our business: The business, which is after all on freehold land owned by our company, will become more self-contained and less vulnerable to potential threats to its management, irrespective of who owns the retained land (Brownrigg Lodges).
- Enhancing the campsite's real and perceived development potential particularly with respect to its future sustainability, thus ensuring continued provision of quality camping accommodation near Bellingham for many years to come. Note that the package treatment plant *will not* add value to the potential sale price of the site since campsites are valued on business income (or potential income). Supporting utilities are not taken into account.
- Installation of a modern package treatment plant will add to our eco-friendly approach over the last 5 years (solar energy installations, electric utility vehicles, enforced use of 'green' ecologically safe toilet, cleaning and laundry detergents).

### **The Proposed Package Treatment Plant**

We have used Hutchinsons Environmental Solutions Ltd, who are based less than a mile from our site, as consultants in our research on potential package treatment plants. Hutchinsons are also familiar with campsite installations and have installed systems on sites owned by the Camping and Caravanning Club. We have selected a HiPAF system supplied by WPL Limited (to be installed by Hutchinsons) for a number of reasons:

### Ease of Installation

The chosen HiPAF system has the smallest footprint of those considered. This reduces the excavation required which, together with the fairly limited new pipe routes required to join to it in the proposed location, limits the spoil and disruption on the campsite, as well as installation costs. Furthermore, we have limited space on site and a smaller footprint enables us to retain car parking space around the proposed location.

### Low maintenance and high long term reliability

We have listened to Hutchinsons who have installed a number of package treatment plants and value their comments on ease of maintenance. The HiPAF system is particularly good in this regard, having no mechanical or electrical moving parts within the tank. Air compressors are low energy and reliable. Furthermore, removing waste by tank is fast and efficient due to the storage of primary sludge and humus together. The midi range tank we are proposing also enables the removal of air distribution parts from the biological section for ease of maintenance. This air diffuser system can also be accessed readily via ground level lids on the plant which have gas struts. The tank surface is glass reinforced plastic, with a UV-safe gel coating and has a guaranteed lifetime of 25 years.

### Seasonal variation in load

The plant has a recycling flow system to balance flow through the primary tank. This balancing of flow means it can handle variable flow very well. We include a table charting our seasonal flow, based on water meter readings and occupancy information (see Appendix). This table highlights the large variation in flow across a season, one of the key reasons why we propose a modern package treatment plant to serve our needs.

### Virtually No Environmental Impact

Unlike most treatment plants, the HiPAF system has no separated primary tank which stores settled solids and can emit odours. It is therefore odour-free.

The plant is installed below ground and will not impede the landscape or visual amenity and offers the discreet system that is imperative for application in a rural tourist setting.

The system emits very low noise, enabling us to sustain our peaceful night time regime. Furthermore, the blowers are housed in an acoustically insulated kiosk. With advice from Hutchinsons, however, we will seek to sound insulate this kiosk to a higher level than standard.

### Discharge Standards

Importantly, the WPL HiPAF system meets high discharge standards (see 'Impact' section later), better than that specified by the Environment Agency, and will safely discharge wastewater into the local environment, including to sites of special scientific interest (SSSI). In our case, the proposed installation site enables easy discharge through an existing land drain to Eals Burn. Whilst Eals Burn is not an SSSI, it forms part of a wildlife corridor. Hence, a modern high standards system is essential. To reinforce our choice of the WPL HiPAF system:

- It is fully compliant with UK Building Regulations and Environment Agency guidelines
- WPL uses British Water's Code of Practice – Flows & Loads
- The compact plant is designed and manufactured to BS **EN 12566-3**.
- The midi and modular options are designed in accordance with BS EN 12255-1/15 and manufactured using BS 4994 as a guide.
- Meets all current legislation under the Environmental Permitting Programme

Note that the same WPL HiPAF system has been installed at The Sill and Chesters Roman Fort (personal communication from Hutchinsons).

### **Proposed Package Treatment Plant: Specification**

In addition to some information on the HiPAF system having been given above, specifications of the proposed HiPAF package treatment plant are included in the application (Document 1 – PTP specification and Document 2 – Plant Data). Hutchinsons Environmental Solutions and WPL have analysed the site occupancy data and water meter details we have provided to them (Appendix) and have recommended a 150PE system (PE, person equivalent, adjusted for touring campsite load), which will operate well below capacity for most

of the year. The British Water Authority have recently increased the per person flow and load for touring campsites from 75 to 100 L per person, relative to the 150L per person for ensuite accommodation provision. Although our water usage indicates that our customers' water usage is similar to the older value of 75 L per person, the system size ensures it can cater for the new flow numbers, able to manage 15,000 L per day. The system is also modular and any need to increase capacity or effectiveness of the system can be achieved by addition of a further module.

#### **New drains/manholes:**

New drainage pipes for black and grey waste water (combined) are required to connect buildings to the installation location for the HiPAF plant. Pipe routes are shown on the site and location plans. The plant is located far closer to our buildings than the current shared filter treatment plant and the new drainage routes are not extensive. A short stretch (approx. 10 m) of new drainage pipe will require installing on our strip of land behind the campsite washblock, along its north-facing side. Any spoil will be removed and the ground above made good with landscaping membrane aggregate and grey gravel in keeping with the current gravel on the campsite. Levelling the ground with gravel will improve drainage by removing or reducing the existing slope that exists towards the building from neighbouring land. It will also help our maintenance access to that side of the building to have a firmer and more level ground. The back of the washblock will also be fenced off from the neighbouring land and its new car park to keep the area neat, tidy and protected. We propose a 2 m distance between the washblock and fence, in accordance with where the owners of Brownrigg Lodges (neighbouring land) believe the boundary lies, though this will not be done until renewed agreement with these owners. Note that our title deeds require us to install and maintain a fence along this boundary and this has been the case since 1992, though none was previously installed due to the presence of electric fencing erected by previous owners of Brownrigg Lodges who grazed horses in this area. To redirect pipe routes from our buildings to the new HiPAF plant, new manholes will be positioned as shown on the plan and drain connections to existing manholes in the neighbouring car park sealed off. The main run of new drain is from the last connecting manhole to the location of the new HiPAF system. All drainpipes will be laid as described in the 'Installation' section of this document.

#### **Proposed Location for the Package Treatment Plant**

It is imperative, as the justification section above should make evident, that the new treatment plant is installed on our land and we thus no longer have issues with understanding, managing and organising maintenance of the system at suitable times, in tune with our needs.

Consultation with Hutchinsons confirms a requirement for a slight land-fall to the plant from the buildings on our site that connect to it. The location proposed is thus at the corner of our current visitor car park. This is the most viable location. Other possible locations discussed with Hutchinsons (next to our washblock or at the bottom of Tweed House garden) are less viable because they fail to meet the provision that there is a landfall from all buildings connected to the plant. Furthermore, the location near Tweed House fails to meet access requirements for maintenance and emptying.

#### **Installation of the HiPAF plant**

All installation details are given in an attached document (Document 3 – installation manual). Some brief notes to summarise key details are provided below.

##### HiPAF 150PE tank:

The tank (see attached Document 1 & Document 2) has dimensions of 4.9 x 3.20 x 2.88 m (l x d x w). The ground in the location shown on the proposed Site and Location plans will be excavated to tank dimensions with a minimum of 150mm clearance all round and under base of unit, also allowing for all pipe and other connections to the unit. Note: Final dimensions will be detailed on a drawing for the plant which will be sent to the us with confirmation of order. All tanks are made bespoke for application on a site. A concrete base will be cast, on which the tank will rest, and kept dry until lifting of the tank into the excavated hole. The base will be level and the tank at a height that suits the invert level of the HiPAF inlet. Lean concrete will infill around the tank to a prescribed depth, just below the inlet/outlet and electrical duct connections. Subsequent to all connections having been made, the remainder of the concrete infill will be made to near the rim of the tank.

### Pipework:

The location of the plant has been chosen to guarantee a sufficient landfall for the pipework to be laid to connect to it at a 1:60 gradient. Pipework will be buried a minimum of 600 mm below ground and the appropriate backfill used to make the ground good again (see Document 4 – manholes and pipe routes). Manhole chambers are constructed of 120 mm concrete mix, with a 450 mm opening and 600 mm iron covers.

### Electrical Installation:

The electrical installation will be performed by a qualified electrician. The supply to the HiPAF will be on a dedicated circuit incorporating isolation and protection devices to the regulation requirements of the Institute of Electrical Engineers. An earth leakage circuit breaker will be incorporated into the supply to the HiPAF unit (with a 30 mA maximum trip current, as recommended).

The system will be wired according to wiring diagrams supplied by the HiPAF manufacturers, WPL. The three phase supply enters our property at the boiler room in our washblock (west end). A new supply cable can be routed underground in an existing service duct and subsequently under Wansbeck House (see Site Plan).

### **Impact**

The application has impact relevant to published strategies of the National and Local Planning Policy.

### Sustainable Development

The first of these to be mentioned here is ‘Sustainable Development’. Under this strategy, a planning application should:

- Be used as a creative exercise to find ways to enhance and improve places
- Objectively aim to meet the needs of an area, including housing, and business development.
- Seek high quality design and amenity for all existing and future occupants of land and buildings;
- Understand the differing roles and characters that areas take, and promote the vitality of our main urban areas; and
- Promote mixed use developments and realise the potential of areas of open land that can perform multiple functions such as wildlife, flood risk management and recreation.

This application for a modern package treatment plant to serve Bellingham Camping and Caravanning Site is essential for the continued operation and effectiveness of this tourist business. The campsite is by far the largest tourist provider close to Bellingham and promotes the town and its facilities on a daily basis. The application addresses the first three bullet points above. The application thus not only meets the development needs of the campsite business but by enabling the campsite to manage its waste water for decades, enhances Bellingham as an area of amenity for tourists in the long term.

### Rural Economy

The National Planning Policy Framework relates to supporting a prosperous rural economy and advises Local Planning Authorities to support economic growth in rural areas to create jobs and prosperity by taking a positive approach to sustainable new development. In particular, it advises that in order to promote a strong rural economy, local and neighbourhood plans should:

- Support the sustainable growth and expansion of all types of business and enterprise in rural areas, both through conversion of existing buildings and well-designed new buildings;
- Promote the development and diversification of agricultural and other land-based rural businesses;
- Support sustainable rural tourism and leisure developments that benefit businesses in rural areas, communities and visitors, and which respect the character of the countryside. This should include supporting the provision and expansion of tourist and visitor facilities in appropriate locations where identified needs are not met by existing facilities in rural service centres; and
- Promote the retention and development of local services and community facilities in villages, such as local shops, meeting places, sports venues, cultural buildings, public houses and places of worship.

Again, the very sustainability of Bellingham Camping and Caravanning Club Site or, in the future, a campsite not run under a Franchise with the Camping and Caravanning Club, depends on an effective, modern waste water management system that is entirely managed by the campsite owners. By enabling the campsite to

operate long into the future, many of the above objectives for enriching a rural economy are met. The campsite currently attracts up to 6000 visitors to the Bellingham area per year, visitors that respect and enjoy the amenities available and enhance the businesses in Bellingham, helping the small town community to develop and continue to grow. In our running of the campsite, we provide (on check-in) a lengthy introduction to town amenities and a map highlighting Bellingham's shops, cafes and hotels/pubs. We also chat to campers and make regular recommendations during their stay. Our interest in promoting what Bellingham has to offer is a key reason why we have not developed any catering facilities on-site, despite permission from the County Council to do so many years ago. We should also point out that the town's amenities are also a major plus for the campsite, with many guests remarking on how lovely the town is. We thus hope this symbiosis continues for many years to come.

#### Environmental

There will be no detrimental effects on the environment caused by the new package treatment plant. The Environment Agency designated maximum effluent levels of BOD/suspended solids/ammoniacal nitrogen levels of 20/30/20 mg/L are easily met by the WPL HiPAF, which indeed is suited to SSSI, as demonstrated by its installation at the more sensitive site of The Sill. The HiPAF is equipped with a sample chamber prior to discharge to ground water for ready monitoring of these levels. It is obvious that agreed planning permission will be subject to the relevant bespoke permit to discharge from the Environment Agency. The WPL HiPAF system is also efficient in energy demands and emits barely no noise (described earlier). The discharge route does not disrupt the existing land as pipe will be laid in an existing (land) drainage channel.

#### Landscape & Visual impacts

The package treatment plant will be installed into raised land at the corner of our campsite car park. The only part of the plant that will be visible after installation will be the surface and access hatches, all coloured green. Installation will have no effect on the landscape or visual amenity in this area of the campsite and the ground that is disturbed on excavation will be levelled and laid to turf, with all spoil removed from site. Pedestrian access over the plant (dangerously slippery in wet weather) will be prevented initially by installing a temporary low fence comprised of natural material (e.g., brushwood), with signage, ultimately to be completely replaced by hedgerow as plants become established (wildlife attracting mixed hawthorn, hazel, blackthorn, crab apple, dogwood and acer), matching the hedgerow planted on the borders of the adjacent recreation area.

#### **Summary**

The installation of a modern package treatment plant at Bellingham Camping and Caravanning Club Site will ensure the campsite can run effectively for decades to come and release it from a significant burden the property currently suffers on sharing a very old treatment plant with neighbours at Brown Rigg. The treatment plant has been sized appropriately and can readily cope with waste water discharge from the site, both now and in the future. Planning approval to install this WPL HiPAF package treatment plant will be followed by an application to the Environment Agency for a bespoke discharge license/permit. The system cannot be installed without such permit, but we seek approval of this planning application first, which (as stated above) we recognise will be conditional on obtaining this discharge permit.

**APPENDIX:**

This Appendix contains data on people on site, recorded on each Friday during our season, followed by (next page) metered water usage during different quarters of the year.

**Person Numbers at Bellingham Camping & Caravanning Club Site**

Data from stays in 2018.

Numbers are 'top end' numbers as they derive from evaluation of people on site each Friday, the peak day of the week (numbers will be lower midweek, especially so March-May and Oct-Dec). Monthly averages are thus over-inflated.

Date	People on site each Friday	Monthly average
<b>March</b>		
2 <sup>nd</sup>	0	55
9 <sup>th</sup>	58	
16 <sup>th</sup>	16	
23 <sup>rd</sup>	80	
29 <sup>th</sup> (Easter)	120	
<b>April</b>		
13 <sup>th</sup>	80	100
20 <sup>th</sup>	130	
<b>May</b>		
4 <sup>th</sup> (B.H)	140	120
11 <sup>th</sup>	105	
18 <sup>th</sup>	107	
25 <sup>th</sup> (B.H)	152	
27 <sup>th</sup>	110	
31 <sup>st</sup>	116	
<b>June</b>		
8 <sup>th</sup>	135	134
15 <sup>th</sup>	110	
22 <sup>nd</sup>	126	
29 <sup>th</sup>	164	
<b>July</b>		
6 <sup>th</sup>	180	162
13 <sup>th</sup>	152	
20 <sup>th</sup>	145	
27 <sup>th</sup>	170	
<b>Aug</b>		
3 <sup>rd</sup>	175	158
10 <sup>th</sup>	175	
17 <sup>th</sup>	160	
24 <sup>th</sup> (B.H)	155	
31 <sup>st</sup>	125	
<b>Sept</b>		
7 <sup>th</sup>	131	116
14 <sup>th</sup>	139	
21 <sup>st</sup>	100	
28 <sup>th</sup>	96	
<b>Oct</b>		
5 <sup>th</sup>	127	105
12 <sup>th</sup>	62	
19 <sup>th</sup>	94	
26 <sup>th</sup> (half-term)	135	
<b>Nov</b>		
2 <sup>nd</sup>	75	54
9 <sup>th</sup>	60	
16 <sup>th</sup>	68	
23 <sup>rd</sup>	36	
30 <sup>th</sup>	32	
<b>Dec</b>		
7 <sup>th</sup>	28	57
14 <sup>th</sup>	57	
21 <sup>st</sup>	20	
30 <sup>th</sup> (New Year)	123	

B.H. = Bank Holiday

## Water usage on Bellingham Camping and Caravanning Club Site 2018

The data below, based on metering, describes the campsite's water usage per day at different times of year. We are reasonably confident that the amount of water metered will be similar (if anything an over- rather than under-estimate) to that ultimately discharged as foul water (grey/black) into the package treatment plant.

09 Dec – 09 March	Averages at 0.5 m <sup>3</sup> per day
09 March – 09 June	Averages at 6 m <sup>3</sup> per day
09 June – 09 Sept	Averages at 9.4 m <sup>3</sup> per day
09 Sept – 09 Dec	Averages at 3.5 m <sup>3</sup> per day

Hence, the peak water usage/discharge average appears to be 9400L per day, but it is certainly possible that some days rise above that and there may be as much as 10-11K litres used. Figures illustrate the seasonal flow demands on a water treatment plant. The figures also confirm the need for a bespoke EA discharge license.