



**ENVIRONMENTAL PERMITTING (ENGLAND AND
WALES) REGULATIONS, 2010**

“FIT AND PROPER PERSONS”

**POST CONVICTION PLAN IN SUPPORT OF
CONVICTION AT HOUGHTON LE SPRING
LANDFILL SITE ON 20TH FEBRUARY 2013**

**PERMIT REFERENCE BU8045IR
(EPR/PP3632LS)**

**Biffa Waste Services Limited
Hoods Close
Leicester
LE4 2BN
Tel: 0121 661 6726**

Registered Office: Coronation Road,
Cressex, High Wycombe,
Buckinghamshire, HP12 3TZ
Registered in England No. 946107

POST CONVICTION PLAN

Name of convicted person or business	Biffa Waste Services Ltd – no individual was convicted.
Address of convicted person or business	Registered Office: Coronation Road, Cressex, High Wycombe, Buckinghamshire, HP12 3TZ
Date	15 th March 2013
Date of birth of person or company registration number	Registered in England – No 946107 (Registered 16/01/69)
Plan completed by (signature)	
On behalf of (signature)	Biffa Waste Services Ltd

CONTENTS:

- 1.0 List of offences covered by this post conviction plan**
- 2.0 Authorisations to which this post conviction plan relates (if appropriate)**
- 3.0 List of all Persons and Relevant persons to which the conviction(s) relates**
- 4.0 Circumstances of the Offence and how and why it occurred**
- 5.0 Effects of Offences on the environment and/or people**
- 6.0 Ensuring compliance in the future**
- 7.0 Potential for repetition**
- 8.0 Details of all authorisations**

1.0 List of Offences Covered by this Plan

The conviction of Biffa Waste Services Limited on 20th February 2013 was in relation to the five offences summarised below, which occurred in or around the period 9th April 2010 and 5th May 2011.

Offence	When & where offence was committed	Identity of convicted party	Sentence	Details of any company to which convicted party is a relevant person
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 3.1.1 of Permit BU80451R, on or before 9 th April 2010.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £15,000, costs of £26,949.73 and victim surcharge of £15 were imposed.	Operator/ Permit holder at Houghton Le Spring landfill site.
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 4.3.1 of Permit BU80451R, on or before 13 th September 2010.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £22,500. Costs are included in those above.	Operator/ Permit holder at Houghton Le Spring landfill site.
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 3.2.1 of Permit BU80451R, on or before 13 th September 2010.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £22,500. Costs are included in those above.	Operator/ Permit holder at Houghton Le Spring landfill site.
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 3.3.1 of Permit BU80451R, on or before 19 th October 2010.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £22,500. Costs are included in those above.	Operator/ Permit holder at Houghton Le Spring landfill site.
Regulations 12(1), 38(1)(a), and 39(1) of the Environmental Permitting (England and Wales) Regulations 2010, in relation to a breach of condition 3.2.3 of Permit BU80451R, on or before 5 th May 2011.	Houghton Le Spring landfill site The Quarry Quarry Row Houghton Le Spring County Durham DH4 4AU	Biffa Waste Services Limited – no individual was convicted.	Fine of £22,500. Costs are included in those above.	Operator/ Permit holder at Houghton Le Spring landfill site.

The Company was convicted of five separate offences, although these are connected to two different types of incident relating to discharges from the site.

The first incident which resulted in one prosecution, related to a one off accidental discharge of leachate through overflow from a holding tank, as a result of human error. The consequences of the incident were minimal and remediated by Biffa at the time and measures taken to prevent a similar re-occurrence.

The second incident type, which resulted in four prosecutions, related to fugitive emissions of leachate via an unforeseen pathway, and which occurred over a period of time until the impact of this emission could be detected via routine monitoring and the pathway determined to allow preventative works. The net effect of this is that it not only resulted in conviction for failure to have taken appropriate measures to minimise the emission, but that it also resulted in convictions for a breach of trigger levels of ammoniacal nitrogen in groundwater, for a discharge of mecoprop which was at the time a list I substance, but also for a failure to have notified the Agency of the latter discharge.

Despite the failure to have notified the Agency of the detection of mecoprop, picked up via routine monitoring, Biffa had originally acted correctly to notify the Agency in accordance with the permit, when initial exceedences of ammoniacal nitrogen trigger levels were detected, which identified the same discharge that would also give rise to the subsequent detection of the more retarded substance mecoprop. In connection with this discharge, Biffa co-operated fully with the Agency and entered into a dialogue in relation to the monitoring of the discharge, investigation of the mechanism that had allowed the discharge, the carrying out of remedial measures to prevent further discharges, the investigation of the potential impact of the discharge, and the implementation of remedial measures to deal with substances that had been discharged from the site already.

2.0 Authorisations to which this post-conviction plan relates (if appropriate)

Authorisation number	Type of Authorisation
Environmental Permit reference BU8045IR (EPR/PP3632LS)	Former landfill PPC permit (Environmental Permit)

3.0 List of all Persons and Relevant Persons to which the conviction(s) relates

Persons Convicted	People or companies for who they are relevant persons (list)	Date of birth or Company number
Biffa Waste Services Limited	n/a	946107 (Registered in England – 16/01/1969)
No persons were convicted	n/a	n/a

Other Relevant Persons at time of Conviction (none convicted)	Position	Date of Birth
Ian Wakelin	Director - Chief Executive Officer	23/03/63
Keith Woodward	Company Secretary & Director	04/01/54

4.0 Circumstances of the Offence and how and why it occurred

Please provide details of the events which led to the offence. Include accountability and any mitigating circumstances that you feel are relevant. Continue on a separate sheet if necessary.

There were convictions for five separate offences, which related to matters arising from two activities that took place at the site. These related to five separate Permit conditions, namely:

Condition 3.1.1 concerning point source emissions not listed in schedule 4 of the Permit, comprising a spillage from a leachate holding tank;

Condition 3.2.1, concerning an emission into groundwater of a list I substance, comprising mecoprop which was at the time considered to be a list I substance, and is understood to have escaped over the site lining system;

Condition 3.2.3, concerning an exceedence of trigger levels for emissions into groundwater specified in schedule 4 of the Permit, comprising ammoniacal nitrogen, and is understood to have escaped over the site lining system;

Condition 3.3.1, concerning failure to have taken appropriate measures to prevent or minimise emissions, comprising the escape of leachate via a defect in the site haul road/engineering design and;

Condition 4.3.1, concerning failure to have notified the Agency of the breach of a limit in the Permit, comprising the discharge of mecoprop which was at the time considered to be a list I substance.

The last four above are all related to the same discharge. The circumstances of the above are outlined further below.

Discharges via the site haul road:

This represents the more significant of the events that took place, and resulted in four of the convictions at the site.

It was not realised at the time that the haul road would provide a pathway for leachate emissions from the site. The Company has established procedures to monitor groundwater quality, to compare the data against established trigger levels, to review trends and to report elevated readings and put in place action plans to further investigate and remediate. Accordingly it should be noted that when it was noted that the level of ammoniacal nitrogen in borehole L2 exceeded the Permit trigger level during April 2009, this was notified to the Agency at the time in accordance with the Permit requirements and the situation was kept under review in accordance with agreed action plans. This subsequently proved to be a one off exception in borehole L2.

However, the company became aware that there may be an issue with groundwater quality when laboratory results for borehole M1, sampled on 26th August 2009, were received back during September and showed the ammoniacal nitrogen concentrations, which now exceeded the relevant trigger level. Following receipt of this, Biffa made a schedule 6 submission to the Agency on 9th September 2009 and also increased monitoring at the same time. Biffa had been undertaking some works on site during August and had discovered a tear in the lining system which may have been due to excavations. This would have resulted in a seepage of leachate, estimated to be the order of 500 to 1000 litres, and was attributed to be the cause of the breach of the trigger level in borehole M1. Biffa undertook repairs to the lining system during August, using appropriate contractors and CQA as required by the Permit, and the liner tear and repairs were reported as part of the Schedule 6 notification relating to the ammoniacal nitrogen trigger level breach.

Biffa also commenced pumping on 9th October 2009 from the affected borehole M1, initially using Waterra pipework during working hours, to attempt to purge the borehole of contamination and also commissioned ESI on 22nd October 2009, a specialist groundwater consultancy, to investigate the contamination further. An emergency action plan was also agreed to supplement the existing approved accident management plan. A more comprehensive monitoring regime was also commenced at the site, above the Permit requirements, from 5th November 2009

Despite the above measures, an increase in ammoniacal nitrogen was measured in borehole M1, along with ammoniacal nitrogen and chloride increases in borehole F1, towards the end of 2009. The Waterra pump was replaced with a larger pump installed in borehole M1, and having secured consent to discharge to sewer, pumping to sewer commenced on 21st January 2010.

The above measures appeared to have resolved the issue and an initial reduction in ammoniacal nitrogen concentration was achieved during early 2010. The data being obtained was initially believed to be consistent with the view that a single release had occurred and that the cause of that release had been addressed. However, despite initial reductions in concentrations of ammoniacal nitrogen measured in borehole M1, the concentrations became static and remained elevated above trigger despite the pumping regime. Biffa remained in dialogue with the Agency concerning this and continued to review the data and discuss cause and effect.

By August, the monitoring data was still showing high ammoniacal nitrogen concentrations, along with elevated chloride concentrations. ESI, having undertaken further groundwater modelling work indicated that there was likely to be a second area of leakage and the site haul road was then postulated as a potential pathway for leachate escape from the site to groundwater. This mechanism had become possible as the roadway, which had initially been a raised descending pathway constructed in inert material, had been subject to changes of gradient as the site was filled, such that it was eventually an ascending pathway into the site with adjoining material filled up to the level of the roadway. The geometry of this, coupled with the perimeter engineering design configuration then in use at the site, permitted either the roadway or adjoining infill to provide a pathway for leachate out of the site over the top of the steep wall lining system engineering and to then be discharged to groundwater via the natural geology.

Having identified the above mechanism, Biffa, with the co-operation of the Agency, undertook investigation of the haul road between 19th and 22nd October 2010, comprising excavation of this where it entered cell 3A at the site, during which a leachate escape pathway was confirmed. Removal of the haul road at this location by 22nd October 2010 prevented any further discharge of leachate from the site.

In order to deal with the residual elevated concentrations within groundwater boreholes, Biffa proposed further measures which included the installation of an abstraction borehole to enable pumping at a greater rate, along with discharge to sewer, the securing of an abstraction licence to remove the groundwater and the commencement of additional groundwater monitoring. Biffa also commissioned ESI to undertake further work in conjunction with Biffa and the Agency, to investigate the sources of leachate that had escaped and to consider impact from this and appropriate corrective measures.

The abstraction borehole, M1A, was installed in February 2011, and pumping commenced from this. Monitoring of water levels throughout 2011 and 2012 has shown an increasing cone of depression (and hence influence) around M1A, thus showing that elevated concentrations of substances are being drawn to this borehole and removed from the groundwater environment. Ongoing monitoring has also shown that concentrations within monitoring boreholes are reducing. Three additional groundwater boreholes proposed to assess impact from the discharge are also scheduled to be installed as soon as landowner permission has been granted.

The main cause for the incident which gave rise to the groundwater discharges was a flaw in the haul road design layout relating to the way changes had been made to this as infilling at the site progressed. This had not been foreseen as a mechanism for leachate discharge to groundwater, and the escape was not the result of a negligent act on the part of the Biffa. Due to the earlier liner tear, which had been dealt with promptly, a further discharge point had not been envisaged, thereby delaying investigation and identification of this pathway. Ultimately, this pathway was identified and Biffa were prosecuted for having failed to take appropriate measures to prevent or minimise these emissions under condition 3.3.1 of the Permit. The consequence of these emissions is that Biffa also breached condition 3.2.3 of the Permit, for emissions of ammoniacal nitrogen in excess of Permit trigger levels, and further breached condition 3.2.1 for having discharged a list I substance into groundwater. The latter substance was identified in groundwater via sampling undertaken on 22nd July 2010, this substance being a substance that would undergo retardation of travel times in the external environment and which would thus be detected at a much later stage than substances such as ammoniacal nitrogen and chloride which are more mobile. Although Biffa had procedures in place for identifying non compliances with trigger levels, and had clearly adhered to these in submission of

schedule 6 notifications relating to ammoniacal nitrogen and chloride, for some reason the large amount of groundwater monitoring and major increase in analysis led to an oversight which led to a failure to notify the Agency via the same mechanisms of the detection of mecoprop, although this data was forwarded to the Agency via routine channels within 28 days of receipt from the laboratory. This has been attributed to a staff training issue at the time. Thus, although the data was reported to the Agency, Biffa were also prosecuted under condition 4.3.1 of the Permit for having failed to notify the Agency in the correct manner of the breach in a limit in the Permit namely the discharge of a listed substance.

The overflow from a leachate holding tank:

This represents the less significant of the events that took place, and resulted in a single conviction for a breach of condition 3.1.1 of the Permit, in that this represented a point source emission not listed in schedule 4 of the Permit. The discharge took place on 9th April 2010.

This offence was a single occurrence on a single day. This was the result of Biffa seeking to respond to the need to deal with elevated leachate levels on site.

Whereas Biffa normally handled leachate via a single fully bunded leachate holding tank, with the leachate being recirculated back into the waste, at the time, due to increased heads, Biffa had ceased recirculation and were removing leachate from the site via tanker. This had resulted in the need to bring into use a second holding tank as a temporary measure. As the tank had been procured as a purely interim measure as part of emergency works, a bunded tank had not been provided, and the additional tank was not alarmed or provided with auto switch off mechanisms to stop pumping when the tank was full. In order to mitigate the potential risk arising from the use of the second holding tank, Biffa had allocated a member of staff to be present at all times when the tank was being filled, with instruction to remain there, to monitor the pumping operation and to switch off the pumps before the tank became full and overflowed.

At the time of the offence, Biffa were pumping leachate into the holding tanks in order that it could be removed from site by tanker. The incident occurred, when despite Biffa having put in place clear instruction on the method of operation of the pumping system, the employee allocated responsibility for the operation inexplicably left his post, whilst allowing pumping to continue. The employee has been severely reprimanded for this disregard of his responsibility.

The Agency was immediately notified of the overflow upon discovery by management of the incident.

Following the incident, the tank was moved, and measures put in place to ensure a repeat could not occur.

5.0 Effects of the Offences on the Environment and/or People

Describe how the offences impacted on the environment and people, including impact on legitimate business, with an assessment of whether you consider that the impact was high, medium or low, giving reasons why you consider the impact to be high, medium or low.

In relation to the offences that occurred at the site above, the potential for any impact upon people or the environment, is through the discharge of substances into groundwater that should either not be discharged under the Permit at all in relation to list I substances, or at concentrations that are elevated above those contained in the Permit in relation to list II substances. These substances may impact upon surface water and its uses/receptors where groundwater provides a contribution to baseflow, or upon drinking water supplies where these are abstracted from groundwater for use, if these substances are present at concentrations in excess of prescribed concentrations.

The nearest receptor to the site is the Stoneygate pumping station which is used to provide drinking water. ESI undertook transport calculations for the releases to evaluate any potential impact upon the Stoneygate pumping station. These calculations have determined potential timescales for any plume of contaminants, which has been reduced by the pumping being undertaken by Biffa, to reach the pumping station, and also the likely maximum concentration of these contaminants should they reach the pumping station. ESI's calculations have shown that the substances released will not reach the pumping station at levels where any compromise of drinking water standards is likely, and that the quality of drinking water will remain safe.

6.0 Ensuring Compliance in the Future

Please describe the measures you have taken to prevent the offence happening again. Include your plans for audit and review.

A number of measures have been implemented to prevent a re-occurrence of the incidents that led to the offences under section 1, above. These are documented below:

The leachate discharge from the holding tank which resulted in conviction for a breach of condition 3.1.1 of the Permit was the result of the use of an unbunded tank and a complete disregard of procedures by an employee who was given responsibility for mitigating against the use of an unbunded tank. The employee was severely reprimanded and retrained following the incident. Notwithstanding this, the tank has been moved and replaced with a new installation comprising a banded and alarmed tank, and the potential for the same incident to happen again has been completely removed.

The leachate discharge via the haul road resulted in a conviction for a breach of condition 3.3.1 of the Permit, for not having prevented or minimised the release, and as a direct consequence of that release also breaches of condition 3.2.3 of the Permit, for emissions of ammoniacal nitrogen in excess of Permit trigger levels, and of condition 3.2.1 for having discharged a list I substance (mecoprop) into groundwater. These breaches were the direct result of the design of road crossing points that did not take into account the potential for leachate to migrate beneath the road, or for the need for a previously satisfactory design to be reviewed and amended as the adjoining waste mass was filled. The impact from the discharges was exacerbated by the geological surroundings at this particular site.

In order to ensure compliance, the road was removed and re-designed to prevent further discharges. To prevent further future non compliance at the Houghton Le Spring site, or indeed other sites, key learning points and actions have been distributed through the Company via Best Practice Groups, which include the companies Engineering Managers who oversee all design and construction work relating to landfill engineering.

The key action points that have been implemented with the Biffa group comprise but are not limited to the following:

- i) The number and type of roadways crossing into the lined area of any site should be severely restricted;
- ii) ☒ All crossing points should be properly designed to allow for leachate to drain or be pumped back into the waste mass;
- iii) All crossing points should be assessed on an ongoing basis and at least annually to confirm they are still fit for purpose;
- iv) Site management should ensure that all engineering edges (lining and capping) are clearly marked out on site to prevent damage to lining systems and waste overtipping;
- v) Leachate recirculation systems should only be used when properly designed and managed.

Ancillary to the above discharges and convictions, Biffa failed to report the discharge of mecoprop correctly under condition 4.3.1 of the Permit, although the data was reported correctly in accordance with other Permit requirements. The lack of compliance with condition 4.3.1 did not result in any increase in impact from the leachate discharge, which was already an ongoing event that was being subject to investigation and implementation of an agreed action plan. The oversight was found to be the result of an isolated staff training issue and has been rectified by additional staff training.

7.0 Potential for Repetition

Do you think it is likely that the offences will happen again? Tick one box.

☐

High (likely to happen again)

☐

Medium

☒

Low (unlikely to happen again)

Please tick one box.

Reasons:

A complete redesign of the site road crossing point has taken place, and learning points have been disseminated to landfill engineering and management staff within the Biffa Group. At the same time, temporary leachate holding tanks have been replaced with an improved specification. These measures will prevent a similar re-occurrence. Site staff have also been retrained in the appropriate reporting procedures.

The Agency has also acknowledged the extent of the improvements and has noted Houghton Le Spring landfill as being one of the most improved sites.

8.0 Details of all Authorisations

Please detail other relevant authorisation that are either issued to you, or are being applied for by you.

APPENDIX 1

Other Licences, Permits or Registrations Held