

POWYS COUNTY COUNCIL

HIGHWAYS, TRANSPORT AND RECYCLING

WASTE AND RECYCLING SERVICES

Response to Compliance Assessment Report CAR_NRW0040523

Rhayader Highways Depot – Permit: DB3930AB

1.0 Action Required

Criteria	Action needed	Complete by
F1	Review the contents of this CAR, update OMP and EMS with details of further appropriate measures including timescales for implementation if appropriate and submit for review, or make a written representation as to why no further measures will be taken	31/03/2023
D2	Provide a site notice as detailed in How to comply with your environmental permit	18/11/2022

2.0 Timeline of report

16/09/2022	NRW Officer routine inspection of site.
28/09/2022	Meeting held between PCC and NRW to discuss inspection.
24/10/2022	Initial CAR_NRW0040523 issued.
30/11/2022	Meeting held between PCC and NRW following issue of initial CAR, where PCC questioned the decision to issue a non-compliance due to discrepancies with interpretation of guidance.
01/02/2023	Final CAR_NRW0040523 issued with recommendations for 'applicable and appropriate' measures.

3.0 Background

Waste and Recycling has been bulked at the Rhayader Depot for many years with very few issues. The site was previously a Highways Depot used for a variety of operational Council functions.

Whilst the site is not ideally located due to the close proximity of housing, i.e. sensitive receptors, complaints regarding odour have only been received from one property, which does share a boundary with the site and has a right of access over Council land. There are many other properties in the vicinity, including others that share a boundary, but there have been no other complainants regarding odour from the site.

Prior to the complainant reporting odour issues directly to NRW, there were some minor incidents reported to the Council around the parking of RCVs close to the complainant's property. This resulted in some odour potentially escaping the boundary of the site, and these complaints were addressed at the time through alternative parking arrangements. Further complaints from the property in question were received via the Local Councillor, and meetings were held on site. During these meetings, no odour was detected, which has made it very difficult to address the complainant's concerns.

As it was felt that the Council, as the operator of the site, had done all that we could, including rearranging parking in the yard, we referred the complainant to NRW as the regulator. Following this there have been 30 incidents reported to PCC via NRW, covering the period from 14/11/20 to 18/09/22. These can be broken down as follows:

- 13 were received over a weekend when the site was closed and hence no activity on site, i.e. no vehicle movements or haulage from site, and all shed doors closed.
- 10 were on a weekday but when the site was closed, again with no activity taking place.
- 7 were during operational hours when loading activity was taking place
- Out of the 30, 4 specify green waste, 3 of which were while the site was closed.

4.0 Response to Action F1 – Odour

The OMP and EMS have been updated to reflect the current situation and have been resubmitted.

A number of recommendations from the guidance document H4 Odour Monitoring have been presented in the CAR under the headings 'Material Management' and 'Waste on site', along with further suggestions and observations from the site inspection.

Site Inspection Suggestions and Observations

Suggestion or observation	PCC Response
Erecting a ground to ceiling barrier between the residual waste bay and the rest of the bulking shed.	Whilst this may have a positive impact on the release of odour when other materials are being either tipped off or loaded, as 23 out of 30 complaints have been when the site has not been operational (i.e. waste not disturbed and doors to the shed closed), is there any evidence from other sites to show that this would solve the issue? We have concerns that this suggestion would not work and could potentially worsen the situation as its likely that the odour is moving via atmospheric flow.

Installation of a screen/wall along the upper yard so that green and food waste was not visible to occupiers of domestic properties. It could also deflect odour emissions.	Neighbouring properties are fully aware of the activities on site, only one of which has submitted complaints. Furthermore, on the day of inspection, the only odour detected in the bay was the smell of 'freshly mown grass' as recorded by NRW Officers. If the odour is rising and then possibly mixing with other more odorous sources as suggested in the report, the screen/wall would need to be very high to have any effect and it is unclear how high such a wall would need to be in order to be successful in possibly deflecting odour emissions. This option has been discounted on the basis of the strength of the retaining wall and site drainage as acknowledged in the CAR. We have considered covering the green waste bay with a retractable cover, however there are concerns that when the cover is removed, a wave of odour would be released which could potentially be worse than any gradual release from current operations. We have sourced an odour suppressing chemical which will be used following the wash down process to try and reduce potential odour emissions from operations on site (please see OMP for detail).
Varying the individuals undertaking odour assessments to avoid desensitisation.	Whilst the daily odour monitoring will need to be carried out by site staff for logistical reasons, further assessments will be carried out by staff who are not based on site.
Loading of material while doors are open.	The OMP has been updated to reflect this as it is not possible to load material with the doors closed. All material is removed from site as quickly as possible to ensure that doors are open for the minimum amount of time, but it should be noted that the majority of complaints have been received when the site has not been operational and hence the doors to the main shed will have been closed. Due to the size of the shed, there is insufficient room within the building to fully contain vehicles during loading and unloading, hence the door needs to be open during this process. A considerable re-development of the site would

	be required if we were to fully contain collection vehicles within the building. We are now introducing an odour neutraliser within the MistAir system to help reduce the odour emissions from the building (please see OMP for detail).
Keeping odorous waste on site for the minimum duration.	Food waste is collected daily except for weekends when it is stored in a sealed container, the container is not opened at all over a weekend so odour cannot escape. Storage times of all materials on site are kept to a minimum.

Material Management

Recommendation	PCC Response
Age of waste – You must provide details of the age of the waste you store and odour characteristics in the OMP. It is known that the mixed municipal waste can be up to three weeks old before it arrives on site. Please provide details for all waste streams.	All material entering the site is recorded. It is not possible to know the exact age of the material, but residual is collected three weekly, green waste fortnightly and food weekly. This has been added to the OMP along with details of quarantined waste arrangements if required. We do strictly limit the amount of residual capacity provided to residents and also run communication campaigns to encourage residents not to use residual bins for putrescible waste such as food.
Storage duration – this must be kept to a minimum.	Material is moved from site as quickly as is operationally feasible, as detailed in the OMP. Food waste is taken away daily, any material remaining on site over the weekend is stored in a sealed container. Residual waste is collected three times per week and green waste twice per week. We are also able to remove odorous waste from site more often than this if required, using our own fleet of vehicles (please see OMP for detail).
Process control – Consider how to manage First In First Out (FIFO). At the time of the inspection there was more	Due to a telehandler breakdown, there was more residual waste on site than there normally would have been on the

than one artic load of waste on site, however there was no clear distinction over which waste was first in, so that it can be first out.	day of inspection. The operation of the site already ensures that waste is managed on a FIFO basis. Under normal circumstances, tipping takes place in one side of the bay at any one time. This is then alternated to accommodate the FIFO principle, negating the need for additional legio blocks.
Putrescible waste arrives in covered/ closed vehicles – mixed municipal waste, food waste and recyclates are known to arrive in covered/ closed vehicles (Refuse Collection Vehicles/ Recycling Collection Vehicles). Please confirm if green waste also arrives covered/ enclosed and provide details in the OMP.	Green waste arrives in the same type of vehicles as residual (RCVs) which are covered/closed.
Site reaching capacity – Monitor the daily tonnage received and keep records.	This is in place as all deliveries are weighed into site. All waste collected for removal from site is also logged after vehicles are 'weighed out'. Haulage is arranged a week in advance to ensure loads are scheduled and material is removed from site in accordance with the OMP.
Site reaching capacity – Document daily and annual storage limits. Details should be in the EMS.	As above, all deliveries are weighed into site and all collections are weighed out. This is part of routine operations at the site to ensure that the staff can effectively manage the operation and haulage requirements.
Site reaching capacity – As residential properties are less than 300m away from the site, you should consider the feasibility of removing putrescible waste by the end of the working day.	Kerbside collection vehicles tip daily at the site, usually towards the end of the working day. It is therefore not possible to remove all putrescible waste from site at the end of every working day. However, regular collections take place, and the facility is managed in such a way that minimal amounts of putrescible waste remain on site.
Site reaching capacity – Use 'lego' blocks to ensure FIFO.	As above.

Checking waste for odour when accepted – Space should be available to check loads for odour before being mixed with piles. For waste stored within the building there should be space to tip inside building with door closed (see additional comments below). Any particularly odorous waste can then be kept separate and removed from site.	Loads are tipped at the front of bays before they are subsequently pushed up by the telehandler and mixed with the existing waste on site. At this stage the loader, who will be outside of the vehicle having acted as a reversing assistant, will check for any abnormally odorous loads. A second check is made by the Site Staff prior to mixing the waste with the existing pile. Any excessively odorous material can be quarantined or removed from site.
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Waste on site

Recommendation	PCC Response
Reducing fugitive emissions through good practice – Use of FIFO or alternative bay (AB) system with a recording system.	As above.
Reducing fugitive emissions through good practice - Make smaller piles to increase the ability for natural aeration.	Using either side of the bay under normal operating conditions results in smaller piles.
Reducing fugitive emissions through good practice – Consider avoiding loading/ unloading during periods of poor dispersion.	This would not be practical due to the nature of the operations of daily kerbside collections.
Reducing fugitive emissions through good practice – Record weather conditions in order to manage operations to reduce odour emissions.	Weather conditions are to be recorded as part of the odour monitoring assessments with data recorded from the new on-site weather station. The OMP has also been updated with actions to be taken should there be changes in the weather which impact the operation of the site.
Reducing fugitive emissions through good practice – Have contingencies in place for equipment failure, these must be recorded in the EMS.	Alternative loading machinery is used where possible and additional equipment is hired in as required.
Reducing fugitive emissions through good practice - Clean empty bays.	When bays are empty, they are routinely cleaned and this is documented. The areas where waste is loaded (but not stored) are also swept

	and washed down at least weekly. An odour suppressant to this wash down process has now been added.
Reducing fugitive emissions through good practice – Jet wash areas that have contained odorous waste on a regular basis.	There is a cleaning schedule in place which is documented. The residual and food waste loading area, plant used, and the food waste pods, are pressure washed daily after loading and unloading. As above, an odour suppressant has been added to this process to further reduce the potential of odour from the food waste handling process.
Reducing fugitive emissions through good practice - Clean and disinfect machinery/ equipment one a week.	Telehandler bucket and wheels are washed daily after loading food waste, with machine washed weekly, again with the addition of the odour suppressant. This same process also applies to the residual and green waste bays.
Reducing fugitive emissions through good practice – Treat drainage systems with bacteria inhibiting solutions (you may need to discuss this with Hafren Dyfrdwy).	This is not recommended by Hafren Dyfrdwy who suggested a better approach would be to maintain channels regularly by dry cleaning to remove any potential build-up of solids and then clean down with water. A procedure is in place to check the channels and slot drains on site on a three-weekly basis, and clean/empty as required.
Reducing fugitive emissions through good practice – Ensure concrete surfaces are sealed to prevent absorption of odour producing residues.	The site surface is impermeable concrete so should not absorb odours. The wash down process with the addition of the odour suppressant should further support this.
Reducing fugitive emissions through good practice – Remove particulates from water drainage systems by using mesh/ screens which are regularly cleaned.	A plate has been installed in the top drain to prevent waste entering the drainage channel. Manholes are currently lifted three weekly to check condition and ensure blockages aren't developing, jet washing is arranged as and when is necessary as a result of the three weekly checks which are to be increased if necessary as a result of monitoring. Entries logged in site diary.

Reducing fugitive emissions through good practice – Ensure any pooling of leachate/ dirty water is removed.	Pooling is unlikely to occur due to the gradient of the site in relation to the drains. However, should any pooling occur, the area will be swept manually and pressure washed clean.
Odour arising from stored waste on site - keep materials on high biomass content out of direct sunlight inside a building.	Only Green waste is stored loose outside, food waste is contained within a sealed skip except for loading, residual waste is stored within the building. We have considered installing a retractable cover over the green waste bay but there are concerns that this could make the situation worse – odour could build up under the cover which would then escape in a ‘wave’ when the cover is retracted.
Odour arising from stored waste on site – Carry out daily audit checks to ensure storage times are complied with.	This is in place with haulage arranged to comply with storage times and to minimise the quantity of material held on site.
Odour arising from stored waste on site - As residential properties are less than 300m away from the site, you should remove putrescible waste by the end of the working day.	As above this is not practical with daily kerbside collections tipping at the end of every working day. The operational times of the site and staff do not allow sufficient time for a haulier to collect from the site following the last collections of the day.
Odour arising from stored waste on site – reduce the rate of evaporation and therefore release of odour i.e., by reducing air flow over waste.	Residual waste is stored inside the building with doors closed unless loading/unloading. There is also a Mist-Air system in place within this building to aid odour suppression. Food waste is stored within a sealed skip, so airflow over the waste is minimal. Green waste is stored outside in an external bay, and hence it is not practical to control air flow across that waste, although we have considered installing a cover over the bay as above. As with other waste streams the haulage is arranged to ensure minimal material is held on site, in accordance with storage times. Haulage is also reviewed throughout the week so additional loads can be

	requested if particularly odorous loads are deposited before the next collection is due.
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Containment and Abatement

Containment	PCC Response
It is understood that it is not possible for vehicles to enter the transfer building and the roller shutter doors to be closed. There is no negative pressure system or an 'enclosed vestibule' for the entry of vehicles. Therefore, further consideration must be given as to how the bulking shed can be operated to provide containment of odours particularly when loading/ unloading all wastes stored within the building. For example, by providing segregation in the building, reducing the door opening frequency/ time, reducing time for loading/ unloading etc. The OMP must then be updated accordingly.	The OMP has been updated to include the measures highlighted, including minimising the opening of the doors. A FIFO system is already in place for the management of residual waste. The operation of the Mist-Air system has also been amended to include use of an odour neutraliser. The frequency of activation of this system will be kept under review and can be reactive to the circumstances on site. We have considered covering the residual waste bay but as with the green waste there are concerns that this would trap the odour which when retracted would be released in a wave which may worsen the situation at the site.
Abatement	
If the use of the extraction fans is recommenced, appropriate end of pipe treatment would be needed. Any abatement system must be designed by a named engineer. Details on how the system will be monitored would need to be in the EMS and monitoring results be available to NRW to demonstrate performance of the system.	Use of the extraction fans was ceased following a noise complaint from a neighbour of the site. It is not the intention to recommence regular use of the extraction fans for this reason but also because this counteracts the operation of the misting system. If the fans are operational the mist is drawn out of the building, reducing its effectiveness. It should also be noted that the majority of complaints have been received when the site has not been operational, the doors closed, and the fans switched off. On this basis, end of pipe treatment would be a significant investment which is unlikely to resolve the situation.

5.0 Response to Action D2 – Site Noticeboard

A noticeboard that conforms with the requirements of condition 2.3.1 has been erected on site.

6.0 Conclusion

The OMP and EMS have been updated to accommodate as many of the suggestions, observations and recommendations as possible whilst taking a reasonably practicable approach.

It should be noted that the complaints have emanated from one source when there are many more potentially sensitive receptors in very close proximity to the site. It should also be noted that there have not been any complaints since the CAR was originally issued in October and indeed since the time of the inspection.

The CAR states the following:

- NRW do not consider that all appropriate measures are being used.
- Nor do they consider that the odour is at a level that would require the site to reduce/cease operations.

PCC have tried to operate the site as a good neighbour to the residents within the vicinity and the overall lack of complaints would suggest that this is the case. The OMP and EMS have been updated to include the points raised in this CAR. We have identified some additional measures which have already been put in place and are also looking into further options and seeking specialist advice (such as the covers over the bays). We will update NRW as and when we make further progress with this.

To quote the CAR again, the H4 guidance states that 'If appropriate measures are being used, then the odour will have to be tolerated by the community, that is unless the residual odour is at such a level that it is unreasonable'. The fact that this report categorised the breach as C3 minor and that 'the odour was intermittent with the breeze but was noticeable and considered to have a minor effect on amenity in the area', suggests that the odour is not unreasonable. On this basis we are happy to include the additional measures within our OMP and EMS as highlighted above and would hope that this provides enough reassurance to NRW.

4th April 2023