

Report: *CWM1005/04*

Date: *April 2018*

MATERIAL RECYCLING FACILITIES,
NANTYCAWS WASTE MANAGEMENT SITE,
LLANDDAROG ROAD,
NANTYCAWS,
CARMARTHEN, SA32 8BG

BESPOKE ENVIRONMENTAL PERMIT VARIATION APPLICATION

Prepared for
CWM Environmental Limited



Prepared by



Office Suite 2
The Beacon Centre for Enterprise
Dafen
Llanelli
SA14 8LQ

Tel: 01554 780544

Fax: 01554 759988

Web: www.thesiriusgroup.com

**Project Quality Assurance
Information Sheet**

NANTYCAWS MRF's BESPOKE ENVIRONMENTAL PERMIT VARIATION APPLICATION

Report Number : CWM1005/04

Report Status : Final

Report Date : April 2018

Prepared for : CWM Environmental Limited

Prepared by : Sirius Environmental Limited
Office Suite 2
The Beacon Centre for Enterprise
Dafen
Llanelli
SA14 8LQ

Written by:



**Lucy J Edds
Environmental Consultant**

**Reviewed &
Approved by:**



**Mark L Griffiths
Environmental Director**

NON-TECHNICAL SUMMARY

Non-Technical Summary

CWM Environmental Limited operate a Residual Waste Materials Recycling Facility (RWMRF) as well as a 'Clean' Materials Recycling Facility ('Clean' MRF) at Llanddarog Road, Nantycaws, Carmarthen, SA32 8BG (National Grid Reference:247312,217627). In October 2013, the operator was granted an Environmental Permit (EPR/KB3097TU) for the operation of the RWMRF, namely a Household, Commercial and Industrial (HCI) Waste Transfer Station with treatment, including the production of Refuse Derived Fuel (RDF). The permit allows for the manual and/or mechanical sorting, separation, screening, baling, shredding, crushing, compaction and bulking up of permitted inert and non-hazardous wastes for the purposes of recovery or disposal. Please note, at present, crushing and shredding is not conducted at the site. RDF is produced from suitable 'residual materials resulting from the mechanical processing of waste at the site, as well as other permitted wastes' (as stipulated within the permit). In February 2015, the operator was granted an Environmental Permit (EPR/YB3293HL) for the operation of an additional Household, Commercial and Industrial Waste Transfer Station with Treatment (Standard Rules SR2008No3_75kte) which was utilised to operate their 'Clean' MRF. This permits the acceptance of non-hazardous wastes (predominantly co-mingled recyclate) to be treated via sorting, separation, screening, bailing, shredding, crushing and compaction for disposal (no more than 50 tonnes per day) or recovery. Please note, at present, crushing and shredding is not conducted at the site.

As part of this Environmental Permit Variation Application, the operator is now proposing to consolidate the RWMRF Permit (EPR/KB3097TU) with the 'Clean' MRF Environmental Permit (EPR/YB3293HL), to allow for ease of regulation and to streamline the MRF operations at the site. The current management techniques, activities, waste types and quantities, operating techniques, emission and monitoring requirements etc listed in the 'Clean' MRF Permit will simply be combined into the RWMRF Environmental Permit and the MRF operations will be permitted under one bespoke Environmental Permit going forward. This will also necessitate the revision of the Environmental Permit boundary to the east of the RWMRF to include the 'Clean' MRF building and external yard area.

In addition to the above, CWM Environmental Limited also propose to extend their current RWMRF permit boundary to the south of the current RWMRF by consolidating a pre-treatment permit into the overall RWMRF permit. This area (previously utilised for waste pre-treatment and sorting prior to disposal) will now be occupied by an extension of the current RWMRF building. The consolidation of the permits will allow for more effective environmental management of the activities, operational flexibility and improve the site layout. It is envisaged that the building extension area will predominantly be utilised to accommodate RDF wrapping and storage and will offer environmental benefits as the activities will be internalised. There will be no overall change to the current activities permitted on site, merely an extension of the building into the revised permit area as a result of the consolidation.

As part of the existing conditions stipulated in the permit now and going forward, it should be noted that the 75 tonnes per day limit is only applicable to treatments that are carried out to directly and intentionally improve the quality of the RDF produced at the site. Therefore, treatment activities conducted to improve and facilitate the handling of the RDF

or to ensure maximum extraction of recyclates from the waste stream (i.e. those activities conducted at Nantycaws) will not be captured and counted towards the 75 tonnes per day limit. After review of recent regulatory guidance and position statement on this type of activity, the RWMRF does not fall within the remit of activities which are subject to the requirements of the Industrial Emissions Directive (IED). This is discussed in further detail within the application document.

As discussed above, the operator is also proposing to consolidate Environmental Permit EPR/HP3098FA (Nantycaws Waste Storage and Treatment Facility) into Environmental Permit (EPR/KB3097TU). Environmental Permit EPR/HP3098FA, which was issued to CWM Environmental in 2010, permitted the operation of a bespoke Household, Commercial and Industrial Waste Transfer Station with treatment (no building) of up to 75,000 tonnes of waste per annum. The permit allows for the treatment consisting only of manual sorting, separation, screening, baling, shredding, crushing or compaction of waste into different components for disposal or recovery. Essentially, the permitted area (which occupies the aforementioned additional area of land to the south of the current RWMRF) was previously utilised as a pre-treatment area for waste prior to disposal. This is no longer in use as all material now has to go through the Pre-Treatment process within the RWMRF building. The area is currently utilised for the storage and wrapping of baled RDF emanating from the Residual Waste Materials Recycling Facility (RWMRF). The consolidation of Environmental Permit EPR/HP3098FA (landfill pre-treatment permit) into Environmental Permit EPR/KB3097TU (RWMRF permit), will also require an amendment of the current RWMRF permit boundary to both encompass the area utilised for the RWMRF building extension (as detailed above) and to incorporate the land covered by the landfill pre-treatment area (much of which is now occupied by the aforementioned RWMRF building extension). The additional conditions specified within the landfill pre-treatment permit, including the specified waste types, activity references and annual throughput etc will not require incorporation into the consolidated permit and can be deleted as appropriate.

The RWMRF is currently permitted to accept up to 125,000 tonnes of waste per annum and the 'Clean' MRF is permitted to accept up to 75,000 tonnes per annum. Whilst the site will not require an overall change in the annual tonnage allowance, in light of the proposed Environmental Permit consolidations, it will require updating to reflect the fact that both MRF's will now be covered by one Environmental Permit i.e. annual throughput will increase to 200,000 tonnes per annum as a combined 'Clean MRF' and RWMRF total.

All operations are carried out upon an impermeable surface (or hardstanding where permitted) with subsequent drainage to a sealed sump (where appropriate). Isolation of discharge is possible where necessary. Fugitive emissions monitoring will be undertaken as required and in accordance with the site's Environmental Permit.

This application therefore looks to address:

1. The consolidation of Environmental Permit Reference EPR/HP3098FA Pre-Treatment Area Permit into Environmental Permit (EPR/KB3097TU) for the Residual Waste Materials Recycling Facility (RWMRF) and amalgamate the permit boundaries as appropriate.

2. The consolidation of Environmental Permit Reference EPR/YB3293HL ('Clean' MRF) into Environmental Permit (EPR/KB3097TU) (RWMRF), allowing for the operation of both MRF's as one bespoke operation going forward. This will also require the amalgamation of permit boundaries and addition of both currently permitted annual throughputs to provide a combined annual throughput of 200,000 tonnes per annum.
3. Restate that the 75 tonnes per day limit associated with the pre-treatment (for recovery) of permitted wastes for the A1 Activity Reference (Waste Transfer Station) and A2 Activity Reference (Refuse Derived Fuel processing facility) will not apply to treatment activities conducted at the site. This limit is only relevant where the express purpose is to directly and intentionally change the nature of the waste in a way that improves its quality as a fuel e.g. calorific (or heating value), moisture content, ash content, chemical composition and heavy metal content.

This application seeks to address the aforementioned points and includes the appropriate fee, application forms, supporting statement, drawings and appendices.

**MATERIALS RECYCLING FACILITIES
ENVIRONMENTAL PERMIT VARIATION APPLICATION,
NANTYCAWS WASTE MANAGEMENT SITE,
LLANDDAROG ROAD,
NANTYCAWS,
CARMARTHEN,
SA32 8BG**

CONTENTS

1.0	INTRODUCTION.....	1
1.1	Scope	1
1.2	Background	1
1.3	Proposed Variation Application Overview	2
2.0	SITE DESCRIPTION	7
2.1	Site Setting	7
2.2	Site Operation Summary.....	8
3.0	OPERATIONAL VARIATION REQUIREMENTS.....	12
3.2	Risk Assessment	13
4.0	CONCLUSIONS.....	15

Drawings

Drawing No.	Title
CWM1005/5/01	Site Location Plan
CWM1005/5/02	Site Boundaries Plan
CWM1005/5/03	Indicative Proposed Operational Layout
CWM1005/5/04	Indicative Proposed Drainage Layout

Appendices

Appendix No.	Title
Appendix 1	TCM Details
Appendix 2	ISO14001 Certificate
Appendix 3	Fugitive Risk Assessment Review
Appendix 4	Accident Risk Assessment Review
Appendix 5	Environmental Permits EPR/KB3097TU, EPR/HP3098FA & EPR/YB3293HL
Appendix 6	Clinical Waste Procedure
Appendix 7	Odour Management Plan
Appendix 8	EWC Code List
Appendix 9	Environment Agency Regulatory Position Statement 176
Appendix 10	Fire Prevention and Mitigation Plan

1.0 INTRODUCTION

1.1 Scope

1.1.1 Sirius Environmental Limited (Sirius) has been appointed by CWM Environmental Limited (CWM) to assist with the preparation of an Environmental Permit Variation Application for their Materials Recycling Facilities at Nantycaws Waste Management Site. This Supporting Statement provides a summary as to the Permit Variation Application required as a result of the aforementioned request. Supporting drawings and appendices are included towards the rear of this documentation.

1.2 Background

1.2.1 Nantycaws Materials Recycling Facilities (Residual Waste Materials Recycling Facility (RWMRF) and "Clean" Materials Recycling Facility) are located at Nantycaws Waste Management Facility, Llanddarog Road, Nantycaws, Carmarthen, SA32 8BG (National Grid Reference 247312,217627).

1.2.2 Prior to the development of the wider Nantycaws facility over the last 20–30 years, the site was comprised of undeveloped fields which were utilised for agricultural purposes. More recently, planings and tarmacadam were laid in the area now occupied by the RWMRF to form a temporary car park, which served the wider site operations. Subsequent to this, in 2013, the Residual Waste 'Dirty' Materials Recycling Facility (RWMRF) was developed at the site. The area to the east of the RWMRF (the area occupied by the "clean" MRF), previously consisted of rough grassland which had regenerated upon superficial soils. The "clean" MRF has been in operation at the site since 2015.

1.2.3 The wider Nantycaws Waste Management Facility includes a number of waste activities including landfill disposal, In Vessel Composting (IVC) and Open Windrow Composting (OWC) and Household Waste Recycling Centre (HWRC), with the applicant's landholding covering an area of c. 62ha.

1.2.4 The Residual Waste Materials Recycling Facility (RWMRF) received its Environmental Permit (EPR/KB3097TU) in October 2013 which authorises the operation of a Household, Commercial and Industrial (HCI) Waste Transfer Station with treatment, including the production of Refuse Derived Fuel (RDF). Wastes accepted at the Residual Waste Materials Recycling Facility (RWMRF) are limited to inert and non-hazardous wastes which are permitted to be treated via manual and/or mechanical sorting, separation, screening, baling, shredding, crushing, compaction and bulking of permitted wastes for the purposes of recovery or disposal. Please note, at present, crushing and shredding is not conducted at the site. The manufacture of RDF is produced via the use of suitable residual materials from the mechanical processing of wastes at the site, as well other authorised wastes which are accepted under the current Environmental Permit (EPR/KB3097TU– Table S2.2). All activities are carried out inside a building upon an impermeable surface with sealed drainage (foul water

drains to a sealed sump). The maximum quantity of waste accepted under this permit is 125,000 tonnes per annum.

- 1.2.5 The 'Clean' MRF, which lies adjacent to the eastern boundary of the RWMRF, obtained its Environmental Permit (EPR/YB3293HL) for a Standard Rules 2008 No3: Household, Commercial and Industrial Waste Transfer Station with Treatment in February 2015. The 'Clean' MRF is permitted to accept up to 75,000 tonnes per annum of non-hazardous waste (the majority of which is co-mingled recyclate). With the exception of "specified waste", (which predominantly comprise non-hazardous inert materials), all bulking, transfer and treatment of waste is carried out within a dedicated building. Wastes are permitted to be treated by sorting, separation, screening, baling, shredding, crushing and compaction. Please note, at present, crushing and shredding is not conducted at the site. Some baled wastes are stored in an external storage shed, in line with an S2 exemption that is held for the site. All waste is stored and treated on an impermeable surface. There is no specific engineered drainage system within the Clean MRF building, however any non-hazardous liquids would be directed towards a low point within the building and removed utilising absorbent materials. Specified waste is permitted to be stored and treated on hard standing or on an impermeable surface with sealed drainage system.

1.3 Proposed Variation Application Overview

- 1.3.1 The existing Environmental Permit for the RWMRF (EPR/KB3097TU), issued in October 2013 allows for the manual and mechanical sorting of a range of non-hazardous and inert wastes for the purpose of recovering recyclable fractions and/or as a feedstock for RDF production.
- 1.3.2 Following on from the initial stages of development of the RWMRF, the operator required additional space in order to allow for increased internal operational flexibility which will further reduce the potential for environmental emissions. Therefore, it is considered necessary to extend the current footprint of the site to include an area of land to the south of the current operation which is also permitted for waste pre-treatment prior to final disposal. The extension of the building into the revised permit boundary area will predominantly be utilised to accommodate the wrapping and storage of baled RDF, and will be accounted for via the consolidation of two permits with directly adjacent operating areas.
- 1.3.3 The consolidated permit area will allow for operational improvements, maximise the potential for recovery of waste, as well as allowing for the effective environmental management of the site. There will be no change to the overall waste operations carried out on site, which have already been considered in the original Environmental Permit (EPR/KB3097TU) application and have therefore already been risk assessed. Notwithstanding this, a review of the appropriate risk assessments has been undertaken to ensure the required environmental compliance is achieved when taking into account the proposed changes. The proposal is described in more detail in the proceeding sections of this Supporting Statement.

- 1.3.4 The extended area, which is a result of the permit consolidation, has previously been utilised as an open-air pre-treatment area which allowed incoming materials to be received, sorted and redirected to the appropriate destination, whether this was for off-site recovery or disposal. These activities were covered by Environmental Permit EPR/HP3098FA, which allowed for the acceptance of up to 75,000 tonnes a year for treatment (no building), consisting of manual, sorting, separation, screening, baling, shredding, crushing or compaction of Household, Commercial and Industrial wastes. However, due to on-going development at the wider Nantycaws waste management facility, the specific use of this area for this activity is no longer required and by consolidating both permits can be utilised to facilitate the extension to the RWMRF building. Given this, the operator proposes to consolidate the landfill pre-treatment permit (EPR/HP3098FA) and the existing RWMRF (EPR/KB3097TU) to provide for a consolidated permit boundary. All other conditions relating to operation of the landfill pre-treatment area e.g. activities, operating techniques, waste types, tonnages etc are not required for inclusion within the proposed permit variation as they are already covered by the RWMRF permit. This approach to the consolidation of the two permits has been recommended and agreed with the regulator in pre-application discussions and meetings.
- 1.3.5 As alluded to previously, currently the RWMRF and 'Clean' MRF are operated under two separate Environmental Permits (EPR/KB3097TU and EPR/YB3293HL accordingly). The operator now proposes to consolidate these two Materials Recycling Facility Environmental Permits to allow for increased streamlining of operations and to allow for ease of regulation of the two facilities going forward. This will entail the amalgamation of the Standard Rules Environmental Permit (for a Household, Commercial and Industrial Waste Transfer Station with Treatment) which currently permits the operations at the 'Clean' MRF, into the RWMRF Environmental Permit to become one bespoke Environmental Permit. That is, the EWC code waste types, activities, conditions, operating techniques, emission and monitoring requirements etc. currently listed within the Standard Rules Permit will be transferred into a bespoke Environmental Permit format. The RWMRF Permit boundary will require revision to encompass the 'Clean' MRF activities to the east of the site. Going forward, the annual throughput (for both MRF activities) will be 200,000 tonnes (125,000 tonnes for the RWMRF and 75,000 tonnes for the 'Clean' MRF). The operator does not require any further changes to the 'Clean' MRF operations or activities as a result of this consolidation.
- 1.3.6 In addition to the above, the operator is taking this opportunity to advise the Regulator that the 75 tonnes per day limit, stipulated within the Environmental Permit (EPR/KB3097TU), Schedule of Activities (Table S1.1) in relation to the pre-treatment of wastes for the purpose of recovery for the Waste Transfer Station (Activity Reference A1) and the Refuse Derived Fuel (RDF) processing facility (Activity Reference A2) only applies if treatments are conducted in order to intentionally and directly improve the quality of the fuel as set out in Regulatory Position Statement RPS176. This is discussed in further detail in the proceeding sections.

- 1.3.7 The introduction of the Industrial Emissions Directive (IED) extended the scope of activities in the UK which were to be classified as Installations. The IED stipulates that installation activities were now to include the pre-treatment of waste for incineration or co-incineration where the activity is more than 75 tonne/day for a recovery activity or a mix of recovery and disposal activities, or more than 50 tonnes/day for a disposal activity. The IED, however, provides no clear definition of 'pre-treatment'. In previous correspondence with Natural Resources Wales (NRW), they have indicated that the 75 tonnes a day limit on the recovery of waste was included within the operators current RWMRF permit (issued in 2013) as a future/legal proofing measure, to account for the previous lack of formal definition on what constituted pre-treatment of waste for incineration or co-incineration.
- 1.3.8 More recently, NRW have indicated that pre-treatment of waste for incineration or co-incineration can now be defined as treatment that directly and intentionally, changes the nature of the waste in a way that improves its quality as a fuel. This would essentially require the intentional pursuit of a change in 5 key parameters that improves its quality as a fuel e.g. calorific (or heating) value, moisture content, ash content, chemical composition and heavy metal content including for example to fulfil contractual requirements or product standard requirements. This view is in line with that which has been published by the Environment Agency within Regulatory Position Statement 176 (contained within **Appendix 9**) which relates to the amendment of Regulatory Guidance Note No.2 (Understanding the meaning of a regulated facility).
- 1.3.9 The Environment Agency go on to indicate that if a waste treatment is carried out for an alternative purpose (other than to improve its quality as a fuel) and only incidentally improves the quality of the waste as a fuel, then it is not considered to be captured by IED and therefore will not require permitting as an Installation. With this in mind, the aforementioned Regulatory Position Statement 176 goes on to provide examples of waste activities which would **not** be considered to be pre-treatment for incineration or co-incineration even though they generate an output which will ultimately be utilised for combustion. This includes (but it is not limited to) the following:
- Mechanical separation of waste in order to recover the recyclables
 - Size reduction which may assist in the handling of the fuel but is not primarily for the purpose of improving its combustion characteristics
 - Baling which may assist in the handling of the fuel but is not primarily for the purpose of improving its combustion characteristics and;
 - Shredding or chipping which may assist in the handling of the fuel, but it is not primarily for the purpose of improving its combustion characteristics
- 1.3.10 The rationale behind the pre-treatment of residual waste at the site is to improve and facilitate the handling of the material, as well as to ensure

maximum extraction of recyclate from the waste stream. The treatment activities conducted at the RWMRF can be considered to be in accordance with the bullet points listed above, and therefore will not be captured by the requirement of the Industrial Emissions Directive (IED). Given this, going forward the RWMRF operations can remain to be classified as a Waste Operation. With this in mind, the operator has taken this opportunity to highlight the above to NRW and to ensure that there is a clear understanding that the 75 tonnes per day limit will merely relate to treatments that carried out to improve the quality of the fuel in accordance with this Position Statement. A summary of site operations is discussed in further detail in Section 2.2 of this document.

1.3.11 Following on from extensive pre-application discussions with the client and the regulator (Natural Resources Wales), a clear picture was formulated regarding the most appropriate approach to the required variation.

1.3.12 After completion of discussions with Natural Resources Wales (NRW), it was considered and confirmed by the Regulator that the proposed changes could be made via a 'Normal' Variation. A Normal Variation application fee would usually be calculated via the use of the variation multiplier and the current OPRA score for the site. However, it has been confirmed during pre-application discussion with NRW, that given that the three Environmental Permits to be varied (RWMRF, 'Clean' MRF and Landfill Pre-Treatment Area) are already in the modern Environmental Permit template and have such been adequately risk assessed relatively recently, the application fee charge would equate to a Minor Technical charge, per Permit to be varied. This attracts an application fee of the £1,280 x 3 which equates to £3,840.

1.3.13 A summary of the elements of the existing permit to be varied are given below;

- Consolidation of Environmental Permit EPR/HP3098FA (the landfill pre-treatment permit) into Environmental Permit EPR/KB3097TU (RWMRF permit). This requires the amalgamation of the land currently permitted under the landfill pre-treatment permit into the RWMRF permit. All other conditions contained within the landfill pre-treatment permit can be deleted as appropriate as the activities, waste types and required tonnages are already included in the RWMRF permit.
- Consolidation of Environmental Permit EPR/YB3293HL (the 'Clean' MRF permit) into Environmental Permit EPR/KB3097TU (RWMRF permit). This requires a revision of the RWMRF permit boundary to encompass the 'Clean' MRF activities which are situated to the east of the current RWMRF building. The 'Clean' MRF standard rules Environmental Permit (including EWC code waste types, activities and conditions etc) will become absorbed into the RWMRF Environmental Permit to comprise one bespoke Environmental Permit. The revised annual throughput for both operations going forward will be 200,000 tonnes (125,00 tonnes can be attributed to the RWMRF and 75,000 tonnes to the 'Clean' MRF).

1.3.14 The application consists of the following documents;

- Application Forms and Fee;
- Non-Technical Summary;
- Supporting Statement;
- Appendices
- Drawings including Site Location Plan, Site Boundaries Plan and Indicative Proposed Operational and Drainage Layout.

2.0 SITE DESCRIPTION

2.1 Site Setting

- 2.1.1 The operations under consideration for this Environmental Permit Variation Application (EPVA) are Nantycaws Materials Recycling Facilities (MRF's) located at Nantycaws Waste Management Facility, Llanddarog Road, Nantycaws, Carmarthen, SA32 8BG. The Ordnance Survey grid reference is NGR 247312, 217627.
- 2.1.2 Access to and egress from the site is undertaken via a dedicated junction off the westbound carriage of the A48, via the main access road (an unclassified road to the south of the A48) which also serves the wider waste management operations at the site. The site is located approximately 1.3km to the south east of the village of Nantycaws, on the southern side of the A48 dual carriageway between Cross Hands and Carmarthen. The small village of Llanddarog is situated approximately 2.9km to the south east.
- 2.1.3 The site is bounded in all directions by the wider footprint of the applicant's landholding. The site's access road and an agricultural field is situated adjacent to the site's eastern boundary, with a hedgerow and open windrow composting activities to the west. There are open fields (which are owned by the applicant) and further hedgerows situated to the north, beyond which the A48 dual carriageway runs in a broadly east/west alignment. The site is bound upon its southern boundary by the further extents of the unclassified site access road beyond which lies the site offices, weighbridge and car parking facilities.
- 2.1.4 The land was previously utilised for grazing purposes as part of the "*Llety-dau-filwr*" farm holding. The area of land currently occupied by the RWMRF remained in this undeveloped state until recently when it was utilised as a temporary car park for the wider site operations and ultimately to accommodate the RWMRF facility. The land now occupied by the Clean MRF' previously consisted of rough grassland which had regenerated upon superficial soils. The additional area (to the south of the RWMRF) which will result from the consolidation of the landfill pre-treatment Permit comprises a concreted area which has been previously utilised for pre-treatment of waste prior to its disposal in the adjacent landfill.
- 2.1.5 The site is bounded by a combination of steel palisade gates, fencing and in places, established hedge lines. The main access gate is kept secure out of hours. During operational hours, the main access gate to the north of the wider site (just off the A48) is kept open for staff, customers and visitors. In addition to this, the MRF operations will be undertaken within a building which will be kept secured (locked) during out of hours.
- 2.1.6 The land use surrounding the wider area of the applicant's landholding is predominantly rural in nature interspersed with farm properties and small villages, as well as the busy A48 dual carriageway which is the main route to west Carmarthenshire and Pembrokeshire beyond.

2.1.7 The nearest residential properties include those at "Ty-Her" located circa. 260m to the North West, "Llety-dau-filwr", located c. 290m to the south east, as well as Bronhafod", "Falcondale" and "Avalon" located approximately 305m to the east of the application site. A fuel station is located to the north of the A48, approximately 300m north of the site. A large commercial poultry unit is located beyond Nantycaws landfill site to the west.

2.2 Site Operation Summary

2.2.1 As is relevant to this application, Natural Resources Wales have permitted the operation of a Residual Waste ('Dirty') Materials Recycling Facility (RWMRF) which includes the production of Refuse Derived Fuel (RDF), 'Clean' MRF for the sorting of co-mingled recyclates and a small area of concrete surfacing for pre-treatment activities prior to disposal within the wider Nantycaws Waste Management Facility.

Residual Waste Recycling Facility (RWMRF)

2.2.2 The RWMRF facility is authorised to process up to 125,000 tonnes of inert and non-hazardous waste per year emanating from Household ('black bag' waste), Commercial and Industrial (HCI) sources and also includes non-hazardous large and separated clinical waste bulking and transfer (clinical waste is not permitted to be utilised within the RDF process). This range of mixed waste is treated via manual and/or mechanical sorting, separation, screening, baling, shredding, crushing, compaction and bulking for the purposes of recovery or disposal. Please note, at present, crushing and shredding is not conducted at the site. The manual/mechanical sorting is conducted in order to recover recyclates from the waste stream.

2.2.3 The plant/equipment currently consists of a bag splitter, a number of sort-lines/picking belts and separating equipment (such as screens, magnets, trommels, eddy current separators etc), baling plant, shredder as well as mobile waste handling plant, (grab and loading shovel), forklifts etc.

2.2.4 The RWMRF process line receives predominantly mixed residual and recyclable non-hazardous waste material (as well as some Inert, and non-hazardous bulky and clinical waste) which requires separation for onward processing. These materials are subject to a series of manual and automated sorting operations (in order to recover the recyclable content) which includes a bag splitter, screens, magnetic separators, eddy current separator, elevated picking station etc. Materials will be removed and sorted into their relevant fractions such as aluminium, steel etc.

2.2.5 The residual waste fines from the sort line, as well as other permitted residual wastes (contained within Table S2.2 of Environmental Permit EPR/KB3097TU, a copy of which is included in **Appendix 5**) are deposited to a residual waste storage area which is located within the RWMRF building. Further to this, suitable residual waste emanating from the adjacent 'clean' MRF operation is transferred via a covered conveyor to the RWMRF for storage pending treatment.

From here the waste is separated into two fractions, a residual waste that is suitable as RDF and a residual waste for disposal only (at the adjacent landfill). Other waste sources identified to contain lower levels of recyclable materials are deposited directly into the RDF input storage area, but are subject to a mechanical pick to extract identified large recoverable materials such as metals, wood and large inerts. These materials are removed and set aside for resale or suitable disposal. The residues from this process along with those from the sort line enter the RDF preparation route.

- 2.2.6 The prepared (suitable) RDF feedstock is loaded by an excavator fitted with a grab handler or loading shovel into an electrically powered shredder, which is situated within the RWMRF building. The shredder reduces the size of any large items for the primary purpose of improving the baling process and to facilitate handling. The shredded material is then transported via conveyor to the baling plant. Within the baling plant, the material is tumbled and condensed to form a round bale. The bales of residual waste are then transferred to a storage area in order to undergo wrapping. The round bale is stabilized with netting and then fully wrapped with multi-layers of film to assist in the handling of the fuel. The wrapped RDF bales are then stored prior to onward transfer to an appropriate facility. The resulting bales can be directly used as a fuel in an Energy from Waste operation to produce electricity.
- 2.2.7 The waste stream at the RWMRF is not treated to fulfil contractual or product standard requirements. Any change in the quality of the RDF as a fuel as a result in changes applied to physical characteristics to improve handling is purely incidental, as opposed to the primary purpose. All treatment activities are conducted merely to facilitate handling and to ensure that the maximum extraction of recyclates from the waste stream is achieved. Therefore, the treatments carried out can be considered to constitute that of a waste operation (as opposed to an Installation covered by IED) given that they are not carried out to improve the quality of the RDF as a fuel as set out within RPS176.
- 2.2.8 All RWMRF equipment and treatment processes are housed within a purpose-built building, with doors that only open to allow access. This avoids the risk of fugitive emissions from the RWMRF operation. All environmental monitoring requirements are stipulated within the current Environmental Permit contained within **Appendix 5**. All operations are carried out upon impermeable concrete surfacing with sealed drainage. Drainage is to a sealed sump within the RWMRF. There is no specific engineered drainage system within the Clean MRF however any non-hazardous liquids would be directed towards a low point within the building and removed utilising absorbent materials.
- 2.2.9 Further to this, the wrapping/storage of the baled RDF will be relocated to an area previously occupied by the pre-treatment for disposal operation. Both permits are consolidated as part of this Environmental Permit Application. With this in mind, the operator proposes to incorporate the permitted boundary area of the landfill pre-treatment area (EPR/HP3098FA) into that of the RWMRF permit, by way of consolidation. This amalgamation of the permit boundary will

cover all revised operations proposed for the site. All other conditions within the landfill pre-treatment area can be removed.

'Clean' MRF

- 2.2.10 The 'Clean' MRF is permitted to accept up to 75,000 tonnes of non-hazardous Household, Commercial and Industrial (HCI) waste deemed suitable for recycling. This includes dry recyclates such as paper, cardboard, glass, plastics and metals etc. Waste inputs will predominantly be in co-mingled form, which is a function of the current collection strategy employed by local authorities across the south west Wales region. Notwithstanding this, the facility will be capable of processing source segregated recyclates as required. Incoming materials will be stored in bays prior to being put through the various treatment processes and separated into its constituent parts.
- 2.2.11 The co-mingled recyclate is treated via a variety of manual and automated means, including elevated pre-sort picking stations, trommel, ballistic separators, overhead band magnets, eddy current separator and materials baling press. The material is loaded into a bag splitter and is transported around the treatment process via series of conveyors.
- 2.2.12 Post treatment storage will be predominantly in a building (in accordance with the Environmental Permit), or in dedicated bays. In the event that baled recyclate is stored externally this will be carried out in accordance with the requirements of an S2 exemption which is currently held for the site.
- 2.2.13 A conveyor belt system is in place between the 'Clean' Materials Recycling Facility (MRF) and adjacent Residual Waste ('Dirty') Materials Recycling Facility (RWMRF). The conveyor belts allow for the transfer of residual waste from the 'Clean' MRF to the RWMRF.
- 2.2.14 All bulking, transfer and treatment of materials will be undertaken inside the building unless stored or treated externally as "specified waste" in accordance with the Environmental Permit or the S2 Exemption. All internal storage areas will be situated upon a substantial thickness of impermeable concrete surfacing with sealed drainage (drainage is to a low point), therefore the potential for interaction with water which could lead to the generation of contaminated liquids is extremely limited. The "specified wastes" are predominantly comprised of non-hazardous inert materials and will be stored and treated on a suitable hardstanding or on an impermeable surface with integral drainage system.
- 2.2.15 As part of this application, the operator has proposed to consolidate the 'Clean' MRF Environmental Permit (EPR/YB3293HL), including all activities, EWC codes and permit boundary with the RWMRF Environmental Permit (EPR/KB3097TU). This will equate to a revised annual throughput for both facilities of 200,000 tonnes per annum.

Site Operations Management

- 2.2.16 The Technically Competent Management (TCM) qualified staff for the MRF operations is Bruce Creamer (MRF Manager). He holds the relevant certificates for the treatment and transfer of the permitted wastes. Copies of all necessary certificates are included within **Appendix 1**.
- 2.2.17 In terms of Duty of Care requirements, the waste producer is required to carry out level 1 and 2 compliance checks i.e. basic characterisation and compliance testing (as required). CWM also carries out level 3 checks which includes on site verification carried out by site personnel. All clinical waste (accepted at the RWMRF) will be handled in accordance with Sector Guidance Note EPR5.07 and the operators clinical waste procedure (contained within **Appendix 6**).
- 2.2.18 Vehicles arrive on site via the unclassified road situated to the south of the A48. When entering the site, the waste load must stop at the weighbridge in order for the appropriate weights of the waste load to be obtained and to ensure the undertaking of the Duty of Care checks in accordance with the site's Environmental Permit. The waste delivery would then receive further instruction from the weighbridge operator.
- 2.2.19 If it is the first time the waste producer has visited the site, then they are required to produce documented proof that they are a registered waste carrier and have all the requisite Duty of Care paperwork, as well as undergoing a site induction and an introduction to site health and safety. All vehicles entering the site must produce a valid Waste Transfer Note (WTN) before entry is permitted. When possible, a visual inspection will be carried out at the weighbridge to confirm the description on the transfer note. Once satisfied, the driver will be directed to the appropriate area of the RWMRF or 'Clean' MRF (dependent on the waste load) for unloading and storage, pending treatment. A second round of checks is carried out at the unloading stage to reconfirm the waste description as designated by the waste transfer note. If necessary, waste vehicles are further weighed once more when exiting the site if obtaining of a tare weight is needed.
- 2.2.20 In the event that wastes are delivered that are not considered acceptable under the site's Environmental Permit, they will either be rejected or held on site for further investigation/liaison in conjunction with Natural Resources Wales where appropriate.
- 2.2.21 As previously mentioned, after materials are thoroughly checked in at the weighbridge, they are sent to the appropriate location within the RWMRF/'Clean'MRF for unloading and storage pending treatment. The untreated mixed waste materials and comingled recyclate are stored within the appropriate building prior to treatment.
- 2.2.22 The company obtained EMS ISO14001 status for the waste management operations at Nantycaws in 2012 (a copy of the certificate is included within **Appendix 2**). With this in mind, the Materials Recycling Facilities are operated to the highest environmental standards and with cognisance to the sites Management Plan and Environmental Permit.

3.0 OPERATIONAL VARIATION REQUIREMENTS

- 3.1.1 As discussed in Section 1, this application seeks to vary the RWMRF Environmental Permit (EPR/KB3097TU) to include an area of land to the south of the current Permit boundary to allow for the update in RWMRF operations. This will allow greater flexibility and enhance the existing environmental controls by internalisation of activities within an enclosed environment. The amended permit area will then be able to accommodate the wrapping and subsequent storage of RDF bales.
- 3.1.2 The additional area has previously been utilised as a pre-treatment operation which allowed incoming materials to be received and redirected for recovery or disposal as appropriate under Environmental Permit EPR/HP3098FA. The operator now proposes to consolidate the area of land associated with the now redundant pre-treatment permit into the RWMRF Environmental Permit (EPR/KB3097TU), hence amending the boundary, which will capture the necessary requirements of ongoing permitted operations. All other conditions associated with the landfill pre-treatment area can be removed as these will be covered by the RWMRF Permit.
- 3.1.3 In addition to this, the operator is also seeking the consolidation of the 'Clean' MRF Environmental Permit (EPR/YB3293HL) (Standard Rules 2008No3_75ktr Household, Commercial and Industrial Waste Transfer Station with Treatment), with the RWMRF Environmental Permit. This will necessitate the amalgamation of all 'Clean MRF' activities, waste types and quantities, operating techniques, emission and monitoring requirements etc into the RWMRF Environmental Permit to become a bespoke operation going forward. This will also require the revision of the Environmental Permit boundary not only to the south (as discussed in section 3.1.2) but also to the east to encompass the 'Clean MRF' building and external yard area.
- 3.1.4 All treatment activities relating to the processing of RDF are conducted to allow the maximum extraction of recyclates from the waste stream or to facilitate handling. Any improvement in fuel quality can be considered to be incidental as opposed to the primary purpose. Given this, the activity can be considered to constitute a waste operation and subsequently is not captured by IED (as discussed in section 1.0 and section 2.0). Therefore, the daily tonnage limit (in relation to the RDF activity) should only apply to any treatment activity which intentionally improves RDF fuel quality in accordance with RPS176. This variation to the permit will allow for increased daily RDF production at the site, within the overall annual permitted tonnage.
- 3.1.5 As alluded to above, the waste quantities accepted at the RWMRF site will not be amended as part of this application and will therefore remain at 125,000 tonnes per annum. However, due to the consolidation with the 'Clean' MRF, permitted annual throughput will now be revised to 200,000 tonnes per annum to account for the 75,000 tonnes per annum processed at the 'Clean' MRF.

- 3.1.6 The land under the applicants control extends beyond the site in all directions as can be seen on **Drawing Reference Number CWM1005/5/02**. The area of proposed additional land includes the concreted area to the south of the current RWMRF building, which was previously utilised as the landfill pre-treatment area (Environmental Permit EPR/HP3098FA). The revision of the Environmental Permit boundary to the east of the RWMRF will allow for the incorporation of the 'Clean' MRF operations. The revised Environmental Permit boundary is illustrated by the green boundary line on **Drawing Reference CWM1005/5/02**.
- 3.1.7 The area of land which was previously utilised as part of landfill pre-treatment operations, which is to be incorporated into the permit as a result of this consolidation, is to be developed out into an area of impermeable surfacing (with relevant drainage arrangements) which will accommodate an extension of the current RWMRF building for the storage (and wrapping) of baled RDF materials. The rationale behind the extension is for the provision of additional internal space to facilitate make improvements to the site layout and to provide increased operational flexibility.
- 3.1.8 The Proposed Indicative Operational Layout as a result of this application is provided at **Drawing Reference Number CWM1005/5/03** which illustrates both the current operational areas and those subject to the extension/revision to the Environmental Permit Boundary.

3.2 Risk Assessment

- 3.2.1 As is required by Form EPC Part C2 General 'Varying a bespoke permit', Question 6 requires an assessment of risk to the environment of the operation. There will be no change to the operations at the site other than the facility covering a wider footprint as well as consolidation of the area covered by Environmental Permit EPR/HP3098FA (landfill pre-treatment area) and Environmental Permit EPR/YB3293HL ('Clean' MRF) into the RWMRF permit (EPR/KB3097TU). The nature of this application, discussed above, is such that the proposed variation is considered 'Normal' in nature. This reflects the level of review required by the Regulator as being moderate.
- 3.2.2 A review and update of a Fugitive Emissions Risk Assessment for the site has been undertaken where appropriate and is included in **Appendix 3** and an Odour Management Plan is included in **Appendix 7**. In addition to this, as a result of the proposed variation, the Accidents Risks for the amended operations have also been considered and are included in **Appendix 4**.
- 3.2.3 The variation includes for the amendment of the site's permit boundary by way of consolidation of the pre-treatment Permit and 'Clean' MRF Permit to encompass an area of land to the south and east. There are no changes to the overall nature of the operations within the permit as varied and consolidated from those which are currently undertaken. All operations are already covered under activities listed within the existing Environmental Permits. The operations within the permit boundary area as amended will continue to be undertaken with the suitable engineered controls extended and to be in place where

required, and that are proportional to the risk posed. It is considered therefore, that there are no risks to the environment over and above what had already been considered in the original application documents and the updated general risk assessment documents provided as part of this variation application. Indeed, potential risks can be considered to have been reduced due to waste treatment internalisation within a building.

4.0 CONCLUSIONS

- 4.1.1 Following on from a request by CWM Environmental Limited (CWM) this application seeks to vary the RWMRF permit at the site to account for an amendment to the consented boundary by way of permit consolidation to incorporate a slightly larger area of land to the south of the site. The additional area was previously utilised as pre-treatment area for the adjacent landfill, and was subsequently regulated under a different permit number to the RWMRF. As part of this variation, the operator now requires the consolidation of the permitted area (only) occupied by the pre-treatment permit to be incorporated into the RWMRF Environmental Permit boundary. All other activities/conditions associated with the pre-treatment permit can be removed as appropriate as these are already covered within the RWMRF permit. The permit boundary extension allows for the further internalisation of operations, within an enclosed building which will allow for substantial environmental benefits.
- 4.1.2 In addition to this, the operator also requires the consolidation of the 'Clean' MRF Environmental Permit into the RWMRF Environmental Permit so that the activities can be permitted as one bespoke activity. This will not require any changes to the activities conducted at the 'Clean' MRF, however the annual throughput for the revised bespoke Environmental Permit will need to be increased to 200,000 tonnes per annum (75,000 tonnes per annum 'Clean' MRF and 125,00 tonnes per annum at the RWMRF).
- 4.1.3 Further to this, CWM have clarified that the specified daily limit (75 tonnes) for the pre-treatment of waste for incineration or co-incineration for the purpose of recovery in relation to the WTS and RDF facility is only applicable to treatments that directly and intentionally improve the quality of the waste as a fuel. The amendments are considered by NRW to be 'Normal' in nature in line with NRW guidance and RPS176.
- 4.1.4 This documentation along with its supporting drawings and appendices, provides the required level of information to enable determination of the application to be made.