

**CONSOLIDATED PERMIT**



**Hereby Permit**

Tesco Stores Limited  
Tesco House  
Delamare Road  
Cheshunt  
Hertfordshire  
EN8 9SL

**To Operate a Part B Installation for the Unloading of Petrol  
into Stationary Storage Tanks and the Filling of Motor  
Vehicles with Petrol at**

Kingswinford Tesco Express  
53 Moss Grove  
Kingswinford  
West Midlands  
DY6 9HP

**Under The Provisions of**

THE POLLUTION PREVENTION AND CONTROL ACT 1999

THE ENVIRONMENTAL PERMITTING (ENGLAND AND WALES) REGULATIONS  
2007

**Permit Reference Number**

PET/PB/21

**Date Initial Permit Issued** 19<sup>th</sup> July 2006

**Variation Notice and Consolidated Permit issued** 10<sup>th</sup> December 2009

A handwritten signature in black ink, appearing to read "T. Glews".

Dated: 10<sup>th</sup> December 2009

**T Glews, Environmental Protection Manager**

(Authorised to sign on behalf of Dudley Metropolitan Borough Council)

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systems for the filling of motor vehicle petrol tanks	

## INTRODUCTORY NOTE TO PERMIT

*This introductory note does not form part of the permit.*

This Environmental Permit (The Permit) is issued by Dudley Metropolitan Borough Council (the Council) under Regulation 13(1) of the Environmental Permitting (England and Wales) Regulations 2007 (S.I. 2007 No.3538), to operate an installation prescribed in Part 2 to Schedule 1 of those Regulations, to the extent specified in the conditions of this permit.

The requirements of this Permit shall be effective from the date of service unless otherwise specified within the Permit. Where a Variation Notice has been served the conditions contained within that Variation Notice shall be effective from the date that the Notice is served, unless a specific implementation date is allocated to specific conditions.

For the purpose of this permit the legal operator of the Installation is Tesco Stores Limited, Tesco House, Delamare Road, Cheshunt, Hertfordshire, EN8 9SL.

## STATUS LOG

The status log sets out the permitting history

DETAIL	REFERENCE	DATE	COMMENTS
Initial Permit	PET/PB/21	19 <sup>th</sup> July 2006	
Environmental Permit	PET/PB/21	6 <sup>th</sup> April 2008	Transfer to Environmental Permit by virtue of Regulation 69 of the Environmental Permitting (England and Wales) Regulations 2007
Variation Notice and consolidated permit issued	WK/200931425	10 <sup>th</sup> December 2009	Variation of permit

End of introductory note

## DESCRIPTION OF INSTALLATION

This Installation falls within the definition of Part 2, Chapter 1, Section 1.2, Part B (d) and (e) of Schedule 1 of the Environmental Permitting (England and Wales) Regulations 2007.

The unloading of petrol from road tankers into stationary underground storage tanks ("Stage I") and the filling of motor vehicles with petrol ("Stage II") at the station within the Installation boundary marked in red on the plan attached to this Permit as Appendix 1 - Site Plan PET/PB/21. For the purposes of this permit "Motor Vehicle" means a mechanically propelled vehicle intended or adapted for use on roads.

The service station has two underground petrol storage tanks and the quantity of petrol unloaded into the storage tanks from road tankers is in excess of 500m<sup>3</sup> per year. The refuelling of motor vehicles at the station results in a throughput of petrol in excess of 3500m<sup>3</sup> per year.

During the filling of a motor vehicle, petrol vapour is recovered through an open active vapour recovery system. Petrol vapour is sucked through the fuel dispensing nozzle by a vacuum pump located in the petrol dispenser. Recovered petrol vapour is sent to an underground petrol storage tank. In order to achieve the required petrol vapour recovery efficiency of at least 85% a computer board located in the dispenser measures the fuel delivery flow rate to the vehicle. The board then sends electronic signals to a proportional valve in a vacuum pump. The opening of the valve is controlled in order to match the vapour recovery flow rate to that of the fuel delivery flow rate.

The vapour recovery system for motor vehicles is automatically monitored to detect a fault in the system. Such a fault is deemed present when the Vapour/Petrol (V/P) ratio recovered by the system, averaged over the duration of the filling of a motor vehicle tank, has fallen to below 85% or has exceeded 115% for ten consecutive filling operations. In these circumstances a visual alarm is activated on the dispenser display and if the fault is not rectified within 1 week the flow of petrol to the dispenser is cut off. It is not possible to restart the dispenser until the fault has been rectified.

## CONDITIONS

### 1.0 THE PERMITTED INSTALLATION

- 1.1 The permitted Installation shall be comprised of the activities specified in Table 1.1 below

Table 1.1	
Activities listed in Part 2 of Schedule 1, of the EP Regulations	Description of specified activity
Section 1.2 Part B (d)-	The unloading of petrol into stationary storage tanks at the service station, where the total quantity of petrol unloaded in 12 months is 500m <sup>3</sup> or more.
Section 1.2 Part B (e)-	The refuelling of motor vehicles at the service station where the petrol refuelling throughput in 12 months is 3500m <sup>3</sup> or more.

- 1.2 The activities authorised under Condition 1.1 shall not extend beyond the site, being the area shown hatched on the Site Plan PET/PB/21 in Appendix 1 to this permit.
- 1.3 If the operator proposes to make a change in operation of the installation, the operator must, at least 28 days before making the change, notify the regulator in writing. The notification must contain a description of the proposed change in operation. It is not necessary to make such a notification if an application to vary this permit has been made and the application contains a description of the proposed change. In this condition “change in operation” means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.
- 1.4 The best available techniques (BAT) shall be used to prevent or, where that is not practicable, reduce emissions to a minimum from the Installation in relation to any aspect of the operation of the Installation which is not regulated by any other condition of this permit.

### 2.0 SITE CONSTRUCTION

- 2.1 Vapours displaced by the delivery of petrol into storage tanks at this service station shall be returned through a vapour tight connection line to the mobile container delivering the petrol. Unloading operations shall not take place unless these arrangements are in place and fully functioning.

- 2.2 The vapour collection system(s) shall be of a size and design as approved by the Council, to minimise vapour emissions during the maximum petrol and vapour flow in accordance with Conditions 2.1 and 4.1.
- 2.3 The connection points on the tank filling pipes and vapour return pipe, and dipstick aperture points shall be fitted with secure seals to reduce vapour leaks when not in active use. If apertures are provided on storage tanks for the use of a dipstick, these shall be securely sealed when not in use.
- 2.4 The fittings for delivery and vapour return pipes shall be different to prevent misconnection
- 2.5 Each petrol storage tank vent pipe shall be fitted with a pressure vacuum relief valve to minimise vapour loss during unloading and storage of petrol. Each pressure vacuum relief valve shall be sized and weighted in order to prevent vapour loss when the storage tanks are not subject to potentially hazardous pressurisation.
- 2.6 Adjacent to the vapour return connection point there shall be a clearly legible and durable notice instructing “*Connect vapour return line before off-loading*” or similar wording. In the case of direct fill operations where the filling points are underground, the sign may be located nearby above ground providing that it is easily visible from the ground. In addition, either:
- (a) the sign shall also refer to the maximum number of tanker compartments which may unloaded simultaneously, or
  - (b) a clear statement of the maximum tanker compartments which may be unloaded simultaneously shall be included on the Petroleum Delivery Certificate.
- 2.7 The venting of petrol vapour shall be through the vent pipes serving the vapour balancing system.

### **3.0 ON-SITE PROCEDURES**

- 3.1 All reasonably practicable steps shall be taken to prevent uncontrolled leaks of vapour from vents, pipes and connectors from occurring. The Council shall be advised immediately of the circumstances of any such vapour leak if there is likely to be an effect on the local community, and in all cases details of any vapour leak shall be recorded in accordance with Condition 6.3.

In this Condition, and in Condition 3.2, a vapour leak means any leak of vapour except those which occur through the pressure vacuum relief valves as described in Condition 2.5 during potentially hazardous pressurisation.

- 3.2 The operator shall immediately advise the Council of the corrective measures to be taken and the timescales over which they will be implemented in the event of a vapour leak described in Condition 3.1.
- 3.3 Instances of vapour lock shall be recorded in accordance with Condition 6.3, and under the circumstances detailed in Condition 3.1, be advised to the Council immediately.
- 3.4 Manhole entry points to storage tanks shall be kept securely sealed except when maintenance and testing are being carried out which requires entry to the tank.

#### **4.0 STAGE I VAPOUR RECOVERY CONTROLS**

- 4.1 The number of tanker compartments being discharged simultaneously shall not exceed two, excluding the diesel compartment.
- 4.2 Prior to the unloading of petrol into the storage tanks, the vapour return hose shall be connected before the delivery hoses. The vapour return hose shall be connected by the road tanker end first and then at the storage tank end.
- 4.3 If dip testing of storage tanks or road tanker compartments is performed before delivery, the dip openings shall be securely sealed prior to the delivery taking place.
- 4.4 Road tanker compartment dip testing shall not be performed whilst the vapour hose is connected, except in the case of split compartment deliveries where dip testing is carried out, which can be safely undertaken to the satisfaction of the Petroleum Licensing Authority.
- 4.5 A competent person shall remain near the tanker and keep a constant watch on hoses and connections during unloading. The competent person may be an employee of the service station operator, or the tanker driver, who has received the necessary training to ensure compliance with Conditions 4.1 to 4.9 of this permit.
- 4.6 All road tanker compartment vent and discharge valves shall be closed on completion of the delivery.

- 4.7 On completion of the delivery the delivery hoses must be discharged and disconnected before the vapour return hose is disconnected. Delivery hoses shall be disconnected at the road tanker end first whilst the vapour return hose shall be disconnected at the storage tank end first.
- 4.8 All connection points shall be securely sealed after delivery.
- 4.9 If the storage tanks or road tanker compartments are dip tested after delivery, the dip openings shall be securely sealed immediately after dip testing is completed.
- 4.10 Petrol delivery and vapour return lines shall be tested prior to commissioning and at least once every twelve months thereafter for vapour containment integrity. A record of the testing shall be kept in accordance with Condition 6.3.
- 4.11 Pressure vacuum relief valves or other similar devices on fixed tank vents shall be checked for correct functioning, extraneous matter and seating and corrosion at least once every three years. A record of the checks shall be kept in accordance with Condition 6.3.

## **5.0 STAGE II VAPOUR RECOVERY CONTROLS**

- 5.1 Vapours displaced by the filling of petrol into motor vehicle tanks shall be recovered through the use of an open active vapour recovery system, and discharged into a stationary petrol storage tank. The filling of motor vehicle tanks with petrol shall not take place unless such a system is in place and fully functioning.
- 5.2 The vapour recovery system required by Condition 5.1 shall be approved for use under the regulatory regimes of at least one European Union or European Free Trade Association country and shall be certified by the manufacturer to have a hydrocarbon capture efficiency of not less than 85% determined through a "type approval test" (as defined in Appendix 2 to this permit). A certificate to confirm such compliance shall be retained at the Installation in accordance with Condition 6.3.
- 5.3 The vapour recovery system required by Condition 5.1 shall be designed, installed and tested in accordance with British, European and international standards or national methods agreed with the Council.



5.4 The petrol delivery and vapour recovery system for vehicle petrol tanks shall be tested in accordance with the manufacturer's specifications and for:

- a) Vapour containment integrity at least once every three years from the 10<sup>th</sup> December 2009, and within one month following any substantial changes or significant events that lead to the removal or replacement of any of the components required to ensure the integrity of the containment system, and
- b) The effectiveness of the vapour recovery system at least once every three years from the 10<sup>th</sup> December 2009. The effectiveness of the vapour recovery system shall be determined in accordance with the requirements of Appendix 3.

Records of testing for vapour containment integrity and the effectiveness of the vapour recovery system shall be kept in accordance with Condition 6.3.

5.5 The installed automatic monitoring system shall:

- a) Automatically detect faults in the proper functioning of the petrol vapour recovery system including the automatic monitoring system itself and indicate faults to the operator. A fault shall be deemed to be present where continuous monitoring during filling of motor vehicle petrol tanks indicates that the Vapour/Petrol (V/P) ratio averaged over the duration of filling has fallen below 85% or has exceeded 115% for ten consecutive filling operations. This only applies to filling operations of at least 20 seconds duration and where the rate of petrol dispensed reaches at least 25 litres per minute, and
- b) Automatically cut off the flow of fuel on the faulty delivery system if the fault is not rectified within 1 week, and
- c) Be approved for use under the regulatory regime of at least one European Union or European Free Trade Association country.

5.6 Adverse results from any monitoring check or testing exercise carried out in accordance with the conditions of this permit shall be investigated as soon as they are received. The operator shall:

- Identify the cause and take corrective action
- Record as much detail as possible regarding the cause and extent of the problem, and the action taken by the operator to rectify the situation, and
- Re-test to demonstrate compliance as soon as possible, and record the results in accordance with Condition 6.3.

The council shall be notified without delay if the results from any monitoring or testing exercise carried out in accordance with Conditions 5.4 and 5.5 identifies adverse results, vapour recovery equipment failure or leaks if there is likely to be an effect on the local community. The operator shall advise the Council of the corrective measures to be taken and the timescales over which they will be implemented.

## **6.0 MANAGEMENT**

6.1 The operator shall maintain and implement written procedures to ensure that regular effective preventative maintenance in accordance with the manufacturer's instructions is employed on all plant and equipment concerned with the capture, transport, control and exhaust of emissions to air. A record of relevant maintenance shall be kept in accordance with Condition 6.3.

6.2 All staff shall be fully conversant with those aspects of the Permit conditions, which are relevant to their duties and shall be provided with adequate training and written operating instructions to enable them to carry out their duties. A record of the relevant training given shall be kept in accordance with Condition 6.3.

6.3 The Operator shall ensure that all records required to be made by this Permit and other records made by it in relation to the operation of the Installation shall:

- (a) be made available for inspection by the Council at any reasonable time;
- (b) be supplied to the Council on demand and without charge;
- (c) be legible;
- (d) be made as soon as reasonably practicable;
- (e) indicate any amendments which have been made and shall include the original record wherever possible; and

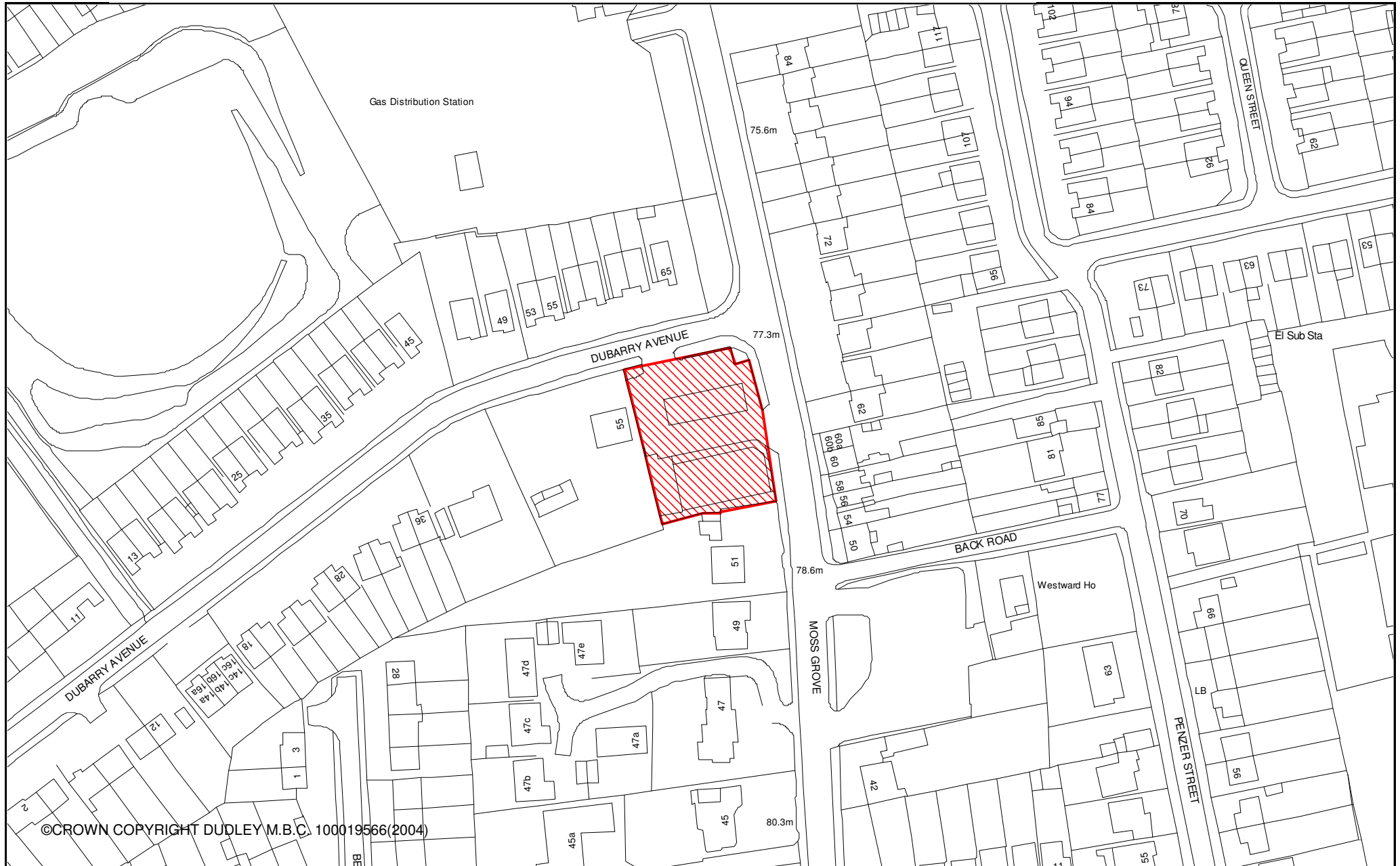
- (f) be retained at the Installation, or other location agreed by the Council in writing, for a minimum period of 4 years from the date when the records were made, unless otherwise agreed in writing.

6.4 Essential spares and consumables shall be held on site or shall be available from a guaranteed supplier at short notice so that equipment breakdown can be rectified rapidly.

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End of Permit Conditions

## APPENDIX 1 – SITE PLAN PET/PB/21



## **APPENDIX 2- TYPE APPROVAL TEST**

A test undertaken to gain approval for use. In the context of this permit, this term is used in relation to approval for use of a vapour recovery system in petrol dispensers for compliance with national regulations. The test will typically include leakage tests and metrology tests as well as tests on hydrocarbon capture efficiency and volumetric efficiency (P/V ratio).

## **APPENDIX 3- DETERMINING THE EFFECTIVENESS OF THE VAPOUR RECOVERY SYSTEM FOR THE FILLING OF MOTOR VEHICLE PETROL TANKS**

The effectiveness of the vapour recovery system for the filling of motor vehicle petrol tanks shall be determined by measuring the ratio of the volume of vapour recovered to liquid petrol dispensed i.e. vapour/petrol (V/P) ratio. The V/P Ratio shall be at least 95% and, where the vapours are recovered into the fuel storage tank, not greater than 105% to avoid excessive pressure build up and consequent release through the pressure relief valves. The V/P ratio shall be determined by simulating the dispensing of petrol using measuring equipment approved for use in any European Union or European Trade Free Association Country. The method to be used shall involve measuring the volume of air recovered with fuel flow simulated at the dispenser and read electronically using the approved measuring equipment. This provides the ratio of air recovered to liquid dispensed (air/liquid ratio) which shall then be corrected to provide the V/P ratio using an appropriate factor to account for the difference in viscosity between petrol vapour and air ('k-factor').