Application SCR evaluation template
(To be completed by NPS, GWCL and EM/PPC officers).

Name of activity, address and NGR	City Oils Limited Bow Biodiesel Plant Vulcan Wharf Cooks Road Stratford London E15 2PW TQ3786783195

Document reference of application SCR	EPR/SP3330NY/S004 - Bow Biodiesel Plant Site Condition Report – Oct 2020  SRAYMOND.vso

Date and version of application SCR	October 2020

1.0 Site details To be completed by NPS (Source)	
Has the applicant provided the following information as required by the application SCR template?	**Response** **(Specify what information is needed from the applicant, if any)**
Site plans showing site layout, drainage, surfacing, receptors, sources of emissions/releases and monitoring points	
Site location is provided in figure 1.1 – Bow Diesel Plant Site plan. Located in (Bow Biodiesel Plant Site Condition Report – Oct 2020) Original site boundary was varied in 2013 to increase the site to the area shown in figure 1.1 specified above. The original permit drainage system included no soakaways or interceptors Within the installation, with the only foul water drainage being provided for domestic sewers. Outside the installation, rainwater falling on the roof of the production building is stated to be lead away separately too communal surface water drains. Drainage plans have not been provided as part of the surrender application, but were submitted in 2015 as part of the variation application.  Pete Smith.vso Site was operated under a Low Impact status, No emission monitoring was set as part of the permit.	

2.0 Condition of the land at permit issue To be completed by GWCL officers (Receptor)	
Has the applicant provided the following information as required by the application SCR template?	**Response** **(Specify what information is needed from the applicant, if any)**
a) Environmental setting including geology, hydrogeology and surface waters b) Pollution history including: • pollution incidents that may have affected land • historical land-uses and associated contaminants • visual/olfactory evidence of existing contamination • evidence of damage to existing pollution prevention measures c) Evidence of historic contamination (i.e. historical site investigation, assessment, remediation and verification reports (where available) d) Has the applicant chosen to collect baseline reference data?	
The Site Condition Report that accompanied the application for the permit at first issue was written on behalf of WJ Curley & Sons Ltd, Appendix A (Bow Biodiesel Plant Site Condition Report – Oct 2020) It features details of the land condition and assessment carried out before the issue of the permit, including, but not limited to: ● Site Setting and Sources of Desk Study Research Information ● Site Reconnaissance ● Assessment of Land Pollution Potential ● Polluting Substances and Relevant Activities ● Assessment of the Likelihood of Land Pollution ● Conceptual Site Model **Hydrological** - The boundary of the site is adjacent to western banks of Bow Back River and 32 metres from the River Lea, to the north. The site is within the Lower Lee catchment, which is predominantly urban, with a high population density. The site is also situated in a floodplain with medium risk to flooding (1-3.3% chance of flooding in a year). Since the granting of the permit, no flooding has occurred on site, including no overtopping of the sealed bund. **Hydrogeological and geological -** Underlying the site is a reinforced concrete raft which is half a metre of made ground supporting the industrial buildings at Vulcan Wharf. Beneath the made ground is drift alluvial material for approximately 7 to 9 metres. Below this is an impervious layer of London Clay of about 5 to 11 metres, and below that is 12 to 18 metres of Woolwich & Reading Beds (Lambeth Group), which sits upon about 10 metres of Thanet Sands, and 16-20 metres of Upper Chalk. The site lies above a highly vulnerable minor aquifer and overlying London Clay' Bow Biodiesel Plant Site Condition Report – Oct 2020 – Appendix A. **Ecological** - The nearest designated habitats are greater than 4 kilometres from the site (the closest being Epping Forest SSSI,4km north east from the site). The original Site Condition Report (Bow Biodiesel Plant Site Condition Report – Oct 2020-Appendix A) explains that the site was utilised by Croda Agricultural, who manufactured paint resins, before WJ Curley & Sons Ltd were lessees. It was likely Croda Agricultural stored methanol or similar substances on the site and no evidence found of historical pollution from the site during Croda Agricultural operation.	

2.0 Condition of the land at permit issue To be completed by GWCL officers (Receptor)	
Has the applicant provided the following information as required by the application SCR template?	**Response** **(Specify what information is needed from the applicant, if any)**
The potentially polluting activities by WJ Curley & Sons Ltd (bio-diesel production) were carried out on a bunded concrete raft, the site's primary protection against pollution of groundwater relied heavily on the integrity of this concrete. There were no records of any land pollution incidents or emergency responses for or in the vicinity of the site by WJ Curley & Sons Ltd before the permit was granted (in 2010). A site reconnaissance was undertaken by MEnv Ltd on behalf of WJ Curley & Sons Ltd on 26 July 2009 to inspect the site and surrounding area for indicators of potential land pollution. Site infrastructure was visually inspected to assess its competence and potential to cause or have caused releases to land. The minor aquifer was assessed to establish whether any spills may have bypassed or penetrated the concrete raft, no such spills were reported. The site reconnaissance did not find an indication of potential areas of land pollution.	

3.0 Permitted activities To be completed by NPS officers (Source)	
Has the applicant provided the following information **as required by the application SCR template?**	**Response** **(Specify what information is needed from the applicant, if any)**
a) Permitted activities b) Non-permitted activities undertaken at the site	
The original Permit EPR/TP3938KQ, held by WJ Curley & Sons, authorised the 'production of biodiesel from new and waste vegetable oils and rendered animal fat'. The permit was for a 'Low Impact' installation under Standard Rules SR2009 No 3. The permit was transferred to City Oils in 2013, and varied to increase the permit area, with a further variation to increase the throughput in 2015. Due to the reduced commercial demand for biodiesel, the operator expanded their operation to include processing used cooking oil (UCO) for supply to third-party biodiesel manufacturers. The site was previously permitted under a standard rules permit (SR2009No3 Low Impact Part A Installation for the production of Biodiesel). As a result of this variation the maximum throughput was increased to 10,000 tonnes per annum, meaning that the operation no longer complied with the standard rules set. All conditions under Standard Rules SR2009No3 were removed and the site operated as a Low Impact Installation (LII) for the manufacture of biodiesel. The permit also includes a waste activity for the physical and thermal treatment of waste (used cooking oil) to the dispatch off site of intermediate product for use in biofuel manufacture. The maximum amount of biodiesel manufactured was limited to three tonnes per day capacity of the site's biodiesel process equipment. The installation continued to qualify for low impact status because it posed minimal environmental concern. There are no significant point source emissions to water, air or land. **S4.1A(1)(a)(ii) -**Producing organic chemicals such as organic compounds containing oxygen, such as alcohols, aldehydes, ketones, carboxylic acids, esters, ethers, peroxides, phenols, epoxy resins	

3.0 Permitted activities To be completed by NPS officers (Source)	
Has the applicant provided the following information as required by the application SCR template?	**Response (Specify what information is needed from the applicant, if any)**
DAA – Storage and handling of intermediates, products, co-products and waste from biofuel manufacture **DAA** - Physical and thermal treatment of waste (used cooking oil) to produce an intermediate product.	

3.0(a) Environmental Risk Assessment To be completed by NPS officers (Source)
The H1 environmental risk assessment should identify elements that could impact on land and waters, cross- referenced back to documents and plans provided as part of the wider permit application.
The environmental risks of the activities were addressed in the Standard Rules' Generic Risk Assessment.

3.0(b) Will the pollution prevention measures protect land and groundwater? To be completed by EM/PPC officers (Conceptual model)	
Are the activities likely to result in pollution of land? (Information on pollution prevention measures will be in another part of the application – Part B)	If Yes, specify what additional controls/checks may be necessary
For dangerous and/or hazardous substances only, are the pollution prevention measures for the relevant activities to a standard that is likely to prevent pollution of land? (If the answer is no, briefly explain how you arrive at your conclusion)	(This may consist of improved infrastructure, targeted surveillance monitoring by the operator and/or inspections by compliance teams)

Application SCR decision summary To be completed by GWCL officer and returned to NPS	**Tick relevant decision**
Sufficient information has been supplied to describe the condition of the site at permit issue; or	
Information is missing- the following information must be obtained from the applicant. (Advise the permitting team on what additional information is needed)	
Pollution of land and water is unlikely; or (Pollution prevention measures just need to be reviewed during operation of the site)	
Pollution of land and water is likely (Advise the permitting team on what additional controls/checks may be necessary)	
Historical contamination is present- advise operator that collection of background data may be appropriate	
Date and name of reviewer	

Operational phase SCR evaluation template
(To be completed by EM/PPC and GWCL officers).
Sections 4.0. to 7.0 may be completed annually in line with normal record checks.

4.0 Changes to the activities To be completed by EM/PPC officers (Source)	
Have there been any changes to the following during the operation of the site?	**Response** **(Specify what information is needed from the applicant, if any)**
a) Activity boundaries b) Permitted activities c) "Dangerous substances" used or produced	
The original Permit EPR/TP3938KQ, held by WJ Curley & Sons, authorised the 'production of biodiesel from new and waste vegetable oils and rendered animal fat'. The permit was for a 'Low Impact' installation under Standard Rules SR2009 No 3. The permitted site boundary changed on the issue of EPR/SP3330NY/V002 in 2013 for Low Impact Part A Installation Standard Rules (see Figure 1.1 Bow Biodiesel Plant Site Condition Report – Oct 2020), following the transfer of the permit to City Oils Limited (EPR/SP3330NY/T001). No changes to their environmental risks and mitigation measures, where identified as a result of the permit changes. The change in boundary was not accompanied by an updated SCR, therefore a review of changes to the environmental setting from permit issue is provided below by the site: • The hydrological setting remains as at permit issue. The Lee (Tottenham Locks to Bow Locks/Three Mills Locks) has a Water Framework Directive 2019 classification of Bad ('bad' ecological status and 'fail' chemical status). Surface water in the area flows to the south. • The hydrogeological and geological setting remains as at permit issue. The site is underlain by Alluvium (Secondary undifferentiated aquifer), River Terrace Deposits (Secondary A aquifer) and the London Clay Formation (Unproductive strata), with the Lambeth Group (Secondary A aquifer), Thanet Formation (Secondary A aquifer) and Chalk (Principal aquifer) at depth. • The ecological setting remains as at permit issue. There are no sensitive designations within 4km of the site. • The surrounding land uses include a regional waste recycling centre 65m to the north-west, 132V and 400V substations 125m north-west, and a grounds maintenance depot for the Olympic Park 120m to the north. Significant construction works have been undertaken in the area since the permit was issued, including across Cook's Road adjacent to the north. EPR/SP3330NY/V003 issued in 2015 changed the permit from Low Impact Part A Installation Standard Rules to Bespoke installation permit, increasing the annual throughput to 10,000 tonnes and included the addition of the following waste operations: Physical and thermal treatment of waste (used cooking oil) to produce an intermediate product. ● R3: Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes) ● R13: Storage of wastes pending any of the operations numbered R1 to R12 (excluding temporary storage, pending collection, on the site where it is produced)	

4.0 Changes to the activities To be completed by EM/PPC officers (Source)	
Have there been any changes to the following during the operation of the site?	**Response** **(Specify what information is needed from the applicant, if any)**
The introductory note of the permit states the installation retained its low impact status since it poses 'minimal environmental concern'. No changes to pollution prevention measures were required and soil and groundwater monitoring remained unnecessary. No additional dangerous substances have been used or produced as a result of the permitted activities since the first issue of the permit.	

5.0 Measures taken to protect land To be completed by EM/PPC officers (Pathway)
Has the applicant provided evidence from records collated during the lifetime of the permit, to show that the pollution prevention measures have worked?
Site advised that the following measures were in place during the operation of the permit: • Adequate bunding of all potentially contaminative liquids that were used, stored or manufactured on the site. • Inspection of the site, tanks, valves and other points of potential leaks were regularly carried out, with replacement as required. • Hardstanding areas and the bund were maintained, including replacement of a section of hardstanding that was noted to be cracked during an inspection. It should be noted that the crack was not in an area of operation. (see CAR report below and site response)    JBASHAM.vso    JBasham.vso • All tanks were sealed and all pumps situated within a sealed cabinet to reduce risks from pollution associated with any site flooding. • Standard operating procedures to follow in the event of spillages, including used cooking oils and mixed fuels, were in place during the operation of the facility that all staff working on site were required to follow. These defined the required actions to be taken in the event of spills occurring both within, and outside of, bunded areas. These procedures were in place, and adhered to, in order to protect the environment and minimise any potential impacts to ground or water from activities on the site. Despite this, the risk of spills occurring outside the bund was low because the handling and storage of waste oils occurred within the bunded area of the site. • Leaks were given a high priority to be repaired immediately, which would prevent a build-up of deposits, and where any deposits were found, these were cleared promptly.

6.0 Pollution incidents that may have impacted on land and their remediation To be completed by EM/PPC officers (Sources)
Has the applicant provided evidence to show that any pollution incidents which have taken place during the life of the permit and which may have impacted on land or water have been investigated and remediated (where necessary)?
An incident logbook was kept for the site to record pollution incidents and remediation actions. Site advised that no pollution incidents have occurred since the issue of the permit. Replacement of a section of hardstanding in a non-operational area was required when it was noted that a crack had formed during routine inspection. This was included within a Compliance Assessment Report (CAR). Corrective actions were then taken to resolve the issue, which involved the removal of the cracked section of hardstanding, and replacement with new concrete, whilst ensuring that joints between the old and new hardstanding sections were sealed so no water ingress could occur. The operator has confirmed that an officer from the Environment Agency visited the site to check on the remedial works and no further action was required. (Although no evidence or date of this has been provided.)

7.0 Soil gas and water quality monitoring (where relevant) To be completed by GWCL officers
Where soil gas and/or water quality monitoring has been undertaken, does this demonstrate that there has been no change in the condition of the land? Has any change that has occurred been investigated and remediated?
No geo-environmental samples were collected during the operation of the site, as no requirements were stipulated within the permit. Therefore, site have stated that no quantitative assessment can be conducted to prove no change in condition. Permitted activities were undertaken in line with the pollution prevention measures listed in Section 2.2 of the site condition report. The site is also covered by hardstanding which provides protection to the underlying soils and groundwater, whilst surface waters are protected from any uncontrolled runoff by the bund surrounding the site and established site drainage. One incident of cracked hardstanding was identified and action was taken to resolve the issue. Site advise that there was a low possibility that contaminated liquids were able to enter the environment through this crack, and have advised that based on other factors, such as the measures in place to minimise the presence of any contaminative products on the hardstanding, the crack being outside of the operational area, and the organic and biodegradable nature of any contaminants that did infiltrate, the impacts from this incident are likely to be minimal and short lived. The operator has confirmed that to their knowledge, no releases to the environment, through accidental spills or leaks, are known to have occurred. The geological setting of the site limits downward migration of fluids in the natural deposits, due to the predominantly clay consistency of the Alluvium, and the very low permeability of the London Clay Formation, which will provide protection to the sensitive deeper aquifers. British Geological Survey borehole records indicate that the made ground in the area has inclusions of ash, and other anthropogenic materials, which may naturally decrease groundwater quality through the release of leachable contamination, which would in turn impact surface water that is in connectivity with it. As the site is covered with maintained hardstanding, the volume of leachate generated under the site would be low. Site have confirmed that with no known sources of contamination emanating on the site, no further deterioration of ground or water condition is believed to have occurred as a result of the operation of the permit.

Surrender SCR Evaluation Template
If you haven't already completed previous sections 4.0 to 7.0, do so now before assessing the surrender.

8.0 Decommissioning and removal of pollution risk To be completed by EM/PPC officers
Has the applicant demonstrated that decommissioning works have been undertaken and that all pollution risks associated with the site have been removed? Has any contamination of land that has occurred during these activities been investigated and remediated?
The six main external UCO processing tanks were flushed through with clean water with the liquid being captured in Intermediate Bulk Containers (IBCs). The tank pipework was then removed. The tanks which were mounted above ground in the bunded area on plinths were lifted on to a low loader using a Hiab, and everything was transported to the Gray's site (EPR/ RP3838JA) for recommissioning. The waste liquid stored in IBCs was also transported to Gray's and reprocessed when the new site became operational. The following equipment, each posing a pollution risk primarily through the leaking of pollutants, has been confirmed as removed from site: ● Generator ● Above ground bulk and operation tanks (Table 3.1) ● Ion Exchange Filters ● Pump box ● All used cooking oil, drums, tins and cans from the storage area Table 3.1 (List of bulk tanks and their condition at the time of removal from site) is located in Bow Biodiesel Plant Site Condition Report – Oct 2020. Site have confirmed that no pollution incidents, such as spills, occurred during the decommissioning activities on the site, and that the 20cm high bund surrounding the Production Building remains in good condition with no breaches present, no pollution escaped this bund to prompt remedial actions for outside the bund . The site was cleared of litter and removed for appropriate treatment or disposal off-site. Photographs of the site after decommissioning are shown in Appendix B of in Bow Biodiesel Plant Site Condition Report – Oct 2020. Area have not undertaken a final site visit to confirm all equipment has been removed, however this is being arranged.

10.0 Statement of site condition To be completed by EM/PPC officers
Has the applicant provided a statement, backed up with evidence, confirming that the permitted activities have ceased, decommissioning works are complete and that pollution risk has been removed and that the land and waters at the site are in a satisfactory state?
Site have confirmed that following decommissioning, the site has been cleared of infrastructure which could act as a source of contamination. No staining or deteriorated hardstanding was noted to be present which would indicate the release of contaminants during operation, or a pathway through which contamination could reach the environment. All potentially contaminative liquids, including wash waters were collected and removed, ensuring that these could not act as a source of pollution. Site have confirmed that they therefore considered that all sources of contamination have been removed from the site, and that there are no potential on-going sources in the ground underlying the site as a result of the operational or decommissioning phases.

9.0 Reference data and remediation (where relevant) To be completed by GWCL officers	
Has the applicant provided details of any surrender reference data that they have collected and any remediation that they have undertaken? (Reference data for soils must meet the requirements of policy 307_03 Chemical test data on contaminated soils – quantification requirements). If the surrender reference data shows that the condition of the land has changed as a result of the permitted activities, the applicant will need to undertake remediation to return the condition of the land back to that at permit issue. You should not require remediation of historic contamination or contamination arising from non-permitted activities as part of the permit surrender.	No reference data provided.

10.0 Statement of site condition To be completed by GWCL officers	
Has the applicant provided a statement, backed up with evidence, confirming that the permitted activities have ceased, decommissioning works are complete and that pollution risk has been removed and that the land and waters at the site are in a satisfactory state?	**Comments** It should be noted that the site location has a low sensitivity with respect to controlled waters. The geology is Superficial (undifferentiated) alluvium going onto a large thickness of Unproductive London Clay bedrock. The site is also not within a Source Protection Zone. The site has operated as a low impact installation throughout its lifetime, and thus there has been no obligation to undertake periodic groundwater monitoring. Similarly there was no groundwater monitoring for the application of the original permit (EPR/TP3938KQ). Therefore I have based my decision on the SCR, the CAR assessments undertaken throughout the permit lifetime, and the actions undertaken by Cityoils in response. The site inspection undertaken on 03/12/2020 outlined a number of issues, including tanks, pipework etc. still remaining on site. In response the operator removed this infrastructure, as well as deep cleaning site surfacing and disposing of the resultant wastewater. This removed the main potential contaminant sources from the site. The follow-up inspection undertaken on 25/03/2021 identified some pooled liquid on the site surfacing, which was subsequently pumped off-site. The fact that this liquid was pooled gives confidence that the site surfacing in this area is appropriate and doesn't represent a pathway to the underlying superficial aquifer. The final verification photos provided by the operator shows the site is clean and clear of most infrastructure. Given that the site infrastructure has been removed, the site cleaned and standing water pumped, the remaining risk to groundwater is low. Therefore I am comfortable supporting site surrender at this time.

Surrender SCR decision summary To be completed by GWCL officers and returned to NPS	**Tick relevant decision**
Sufficient information has been supplied to show that pollution risk has been removed and that the site is in a satisfactory state – accept the application to surrender the permit; or	X
Insufficient information has been supplied to show that pollution risk has been removed or that the site is in a satisfactory state – do not accept the application to surrender the permit. The following information must to be obtained from the applicant before the permit is determined:	
Date and name of reviewer	Alex Coates 31/03/2021