Environment Agency permitting decisions

Part surrender

We have decided to accept the surrender of part of the permit for Yanley Landfill operated by Viridor Waste Exeter Limited

The permit number is EPR/BT7272IW

We are satisfied that the necessary measures have been taken to avoid any pollution risk and to return the site to a satisfactory state.

We consider in reaching that decision we have taken into account all relevant considerations and legal requirements.

Purpose of this document

This decision document:

- explains how the operator's application has been determined
- provides a record of the decision-making process
- shows how all relevant factors have been taken into account

Structure of this document

- Key issues
- Annex 1 the decision checklist

Key issues of the decision

Application

The partial surrender amends the Installation boundary as a consequence of the proposed construction of the South Bristol Link Road (SBLR) which is being built by North Somerset Council (NSC). The current proposals for the SBLR would cross the permitted site within the eastern boundary. Therefore to enable NSC to construct the road an application has been made to amend the Installation boundary by surrendering the land affected by the link road.

The partial surrender encompasses Cell 9B of the landfill, both the north-eastern and south-eastern surface water attenuation ponds, a drainage ditch along the eastern boundary and a disused access track. The surrender of land and the subsequent construction of the SBLR will also result in the loss of three monitoring boreholes associated with the landfill (YN/601, YN/607 and YN/608). The boreholes will be replaced, with the new boreholes situated as close to the existing borehole locations as possible (YN/601a, YN/607a and YN/608a).

The plan on the following page (Plan 1) shows the land which is being surrendered and the land which remains within the permit boundary.

Location of Yanley Landfill

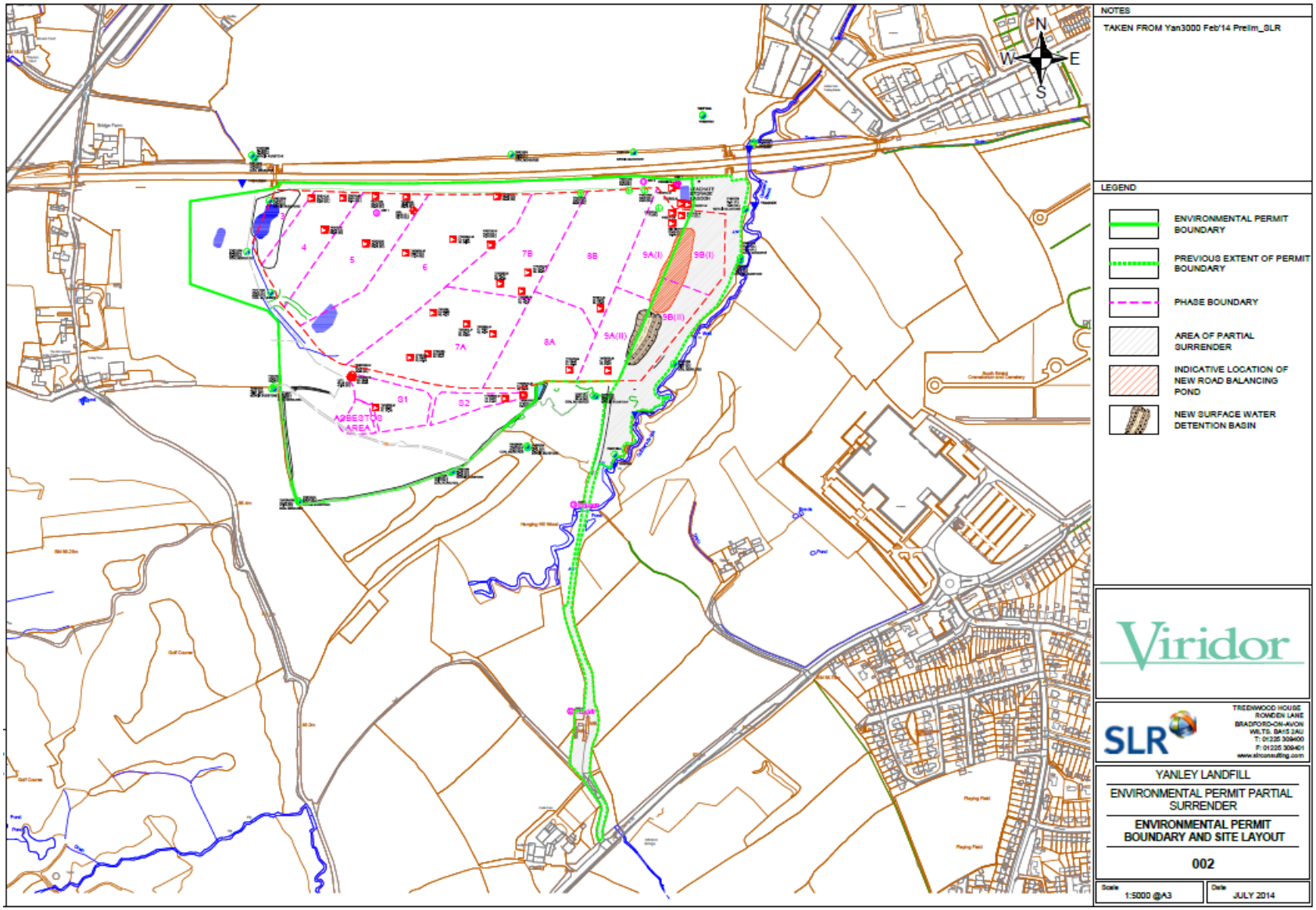
Yanley Landfill is a closed landfill located south west of Ashton Vale, approximately 3 kilometres (km) south west of the centre of Bristol. The site is surrounded by agricultural fields and bordered to the north by a railway line which runs from Bristol to Weston-super-Mare. The nearest residential properties are located approximately 54 metres to the north east of the permit boundary, on Rose Meadow View.

The nearest surface water receptor is a watercourse, Colliter's Brook, which is located approximately 20 metres east of the site's eastern boundary. Colliter's Brook flows in a north-easterly direction before joining the River Avon (located approximately 2.5km to the north-east of the site). There are also a number of existing hydrological features located onsite that form the site's surface water management strategy.

The site is situated on superficial deposits of Head (clay, silt, sand and gravel) and River Terrace deposits, these are classified as secondary (undifferentiated) aquifers. The underlying bedrock (Mercia Mudstone) is designated as a secondary B aquifer under the requirements of the Water Framework Directive. Groundwater vulnerability is classified as minor aquifer based on Groundwater Vulnerability maps. The landfill does not lie within a groundwater source protection zone.

There are two Special Protection Areas (SPAs), three Special Areas of Conservation (SACs) and one Ramsar within 10km of the installation boundary. There is also one Site of Special Scientific Interest (SSSI) and thirteen Local Wildlife Sites (LWS) within 2km of the site.

Plan 1: Showing land which is removed by the partial surrender and land which remains within the permit boundary



Containment Engineering

Cell 9B has been separately engineered from the main body of the non-hazardous landfill. A separation bund, constructed from site derived engineered clay, runs between the boundary of cells 9A and 9B. Containment is provided at the base of Cell 9B by engineered Mercia Mudstone clay.

As Cell 9B was filled only with inert waste, a low permeability cap is not required; however the area has been restored using suitable restoration soils. The restoration of Cell 9B was completed between 2010 and 2012 using inert, uncontaminated soils and other permitted restoration materials as set out in Schedule 2 of the Environmental Permit (EPR/BT7272IW).

Waste acceptance – Cell 9B

All waste accepted for deposit in Cell 9B, including both inert fill and subsequent restoration soils, were assessed against Landfill Directive inert waste acceptance criteria (WAC) limit values provided in the tables in Section 2.1.2.1 and 2.1.2.2 of the Council Decision 2003/33/EC – Waste Acceptance in Landfills.

The majority of waste deposited in Cell 9B consists of site derived soils produced during the excavation of the southern extension of the landfill, this was deposited in Cell 9B between 2003 and 2004. Confirmatory sampling and testing of this material was undertaken at the time of the excavation. The results demonstrated that this material consisted of uncontaminated soils. The remainder of the material deposited in Cell 9B was inert restoration soils, which were imported to the site between 2010 and 2012.

Weighbridge records for the site during the period that Cell 9B was being restored were submitted by the operator in support of this application. The operator has confirmed that there are no records of any non-compliant waste having been accepted or rejected from Cell 9B.

Exploratory boreholes were drilled within Cell 9B during July 2014. The verification analysis included the visual inspection of the constituent materials and the resulting Drilling Report was submitted in support of the application (reference 402.00036.00665). All borehole logs showed mixed lithologies, with no evidence of any non-inert material. Also, assessment of the drill returns did not detect any odour, leachate or other evidence of the presence of pollutants.

Surface water drainage

The proposed new Link Road is aligned in a roughly south-north direction along the eastern boundary of the site and will result in the loss of both the north-eastern and south-eastern attenuation ponds and the drainage ditch along the eastern boundary of the landfill. There will be a reduction in the total area of the site that currently drains to the existing surface water drainage system.

During development of the landfill and prior to the final restoration to grassland the attenuation ponds served a dual purpose. They provided

surface water attenuation to limit the rate of discharge from the site and also provided control of water quality by allowing time for any suspended solids to be settled out prior to discharge from site. The current site is well vegetated and is unlikely to see a significant change in ground conditions in the future. The site is therefore considered to have a low potential for generating suspended solids. The risk of other contaminants is considered low due to the capping system present over the landfill waste. The perimeter ditches are clay lined, this limits the potential for leaching of any contaminants from the landfill to the ditches. It is therefore considered that the loss of the attenuation ponds will not have a significant impact in relation to the quality of runoff from the site.

However, the need for the control of surface water runoff rates from the site to Colliter's Brook remains. The development of the landfill changed the natural response of the site to rainfall; the current rate of runoff is likely to be greater than predevelopment conditions. The amended surface water drainage strategy for the landfill (detailed below) aims to provide a sustainable and integrated water management scheme for the whole site, ensuring no increase in downstream flood risk.

The site's surface water management scheme broadly consists of three drainage catchments (western, north-eastern and south-eastern) with each drainage catchment being formed of sub-catchments (A, B, C, D, E and F). The western catchment is unaffected by the construction of the road and the surrender of Cell 9B and therefore will not change as a result of this application. The portion of the site that is being surrendered is restricted to sub-catchment D only.

Surface water runoff from sub-catchment D is currently collected by the perimeter drain (located along the eastern boundary of the site) and discharges to the north-eastern attenuation pond, prior to discharge into Colliter's Brook. The reduction in sub-catchment area D means the attenuation pond in the north-eastern area is no longer required. Drainage from the remaining area of sub-catchment D will be managed via two separate methods:

1. The first method is to channel the area of sub-catchment D that is located above the 30 metre AOD (above ordnance datum) contour and combine this with sub-catchment E; currently draining to the southern attenuation pond. As the southern attenuation pond will also be removed as part of the surrender, the runoff will be attenuated within a new detention basin to be installed in the south-eastern corner of the landfill. The basin, provides both storm water attenuation and a degree of water quality improvement allowing time for suspended solids to settle .

2. The second method is to attenuate runoff from the remaining area of sub-catchment D (located below the 30 metre AOD contour) via improvements to the existing drainage channel located in the north-eastern region of the site. This will either be a new direct outfall to

Colliter's Brook or by connecting to the existing 450mm diameter culvert that ultimately discharges to Colliter's Brook (subject to confirmation of the levels of the Link Road).

The proposed surface water drainage strategy seeks to maintain the existing surface water drainage regime across the Western Catchment (sub-catchments A and B), as well as sub-catchments C and F. These sections of the site are not impacted by the surrender or proposed Link Road construction.

Land not used for the permanent deposit of waste

The areas of land subject to the partial surrender application that have not been used for the permanent deposit of waste consist of the site access road, a thin strip of bare land along the eastern perimeter of Cell 9B and the areas of the north-eastern and south-eastern surface attenuation ponds.

The site access road has a hard surface and has been subject to Construction Quality Assurance (CQA) procedures and regular inspection and maintenance. As the landfill site is now permanently closed, the access road is no longer required and will be removed in order to accommodate the new Link Road.

Outside of Cell 9B, none of the land which is being surrendered has been used for the deposit, storage or handling of waste. The operator has confirmed that there are no records of any leaks, spills or other incidents that may have led to any contamination of the land.

Boreholes

The surrender of land and the construction of the Link Road will result in the loss of three monitoring boreholes associated with the landfill (YN/601, YN/607 and YN/608). The boreholes will be replaced, with the new boreholes situated as close to the existing borehole locations as possible. The depth of the replacement boreholes is consistent with that of the existing boreholes. The boreholes will provide continued dual purpose monitoring (landfill gas and groundwater) beyond the footprint of the restored landfill, along the eastern flank of the site. They will continue to be monitored in accordance with the permit conditions following their relocation.

Table 1: Current and proposed replacement monitoring boreholes.

Borehole Reference	Grid reference location (current)	Grid reference location (proposed)	Current borehole depth (metres)	Proposed borehole depth (metres)
YN/601(a)	355821, 169670	355816,169571	7.5	10
YN/607(a)	355971, 170062	355951,170092	23.5	25
YN/608 (a)	355975,170069	355951,170091	5	7

The relocation of monitoring boreholes, including installation construction quality assurance (CQA), has been technically assessed and agreed by the Environment Agency, on the understanding that the replacement boreholes would be installed prior to the partial surrender being determined. The locations of the new boreholes are close to the existing ones. We are therefore satisfied that the replacements will still maintain the required spatial distribution.

Leachate Management

Leachate extraction wells are installed across most of the site. Abstracted leachate is pumped to the leachate storage lagoon in the north east corner of the site prior to disposal to sewer.

Due to the low potential for leachate generation associated with the inert waste deposits within Cell 9B, the cell has never been subject to leachate collection. Therefore the proposed surrender of this cell will not impact on the leachate management or monitoring requirements at the site.

Gas Management

An active landfill gas management system is in operation at the site, but due to the low gas generating potential of the inert waste deposits within Cell 9B, this cell has never been subject to gas extraction. The proposed surrender of this cell will therefore not impact on the landfill gas management or monitoring requirements at the landfill.

'Test' for the surrender

The key issue is whether the 'test' for the surrender of permits under paragraph 14 of Schedule 5 to the Environmental Permitting Regulations has been met, as follows:

The regulator must accept an application to surrender an environmental permit in whole or in part under regulation 25(2) if it is satisfied that the necessary measures have been taken –

- *to avoid a pollution risk resulting from the operation of the regulated facility; and*
- *to return the site of the regulated facility to a satisfactory state, having regard to the state of the site before the facility was put into operation.*

We are satisfied that the ‘test’ for the surrender of permits under paragraph 14 of Schedule 5 to the Environmental Permitting Regulations has been met and the environment has been protected through a combination of a geological barrier and controls on waste acceptance. We are satisfied that we can accept the surrender of the land as described above.

Annex 1: decision checklist
This document should be read in conjunction with the Duly Making checklist, the application and supporting information and permit/ notice.

Aspect considered	Justification / Detail	Criteria met Yes
The permit conditions		
Changes to permit conditions	The permit conditions have changed as a result of the partial surrender: • Tables S3.1, S3.3, S3.4, S3.5, S3.6, S3.9, S3.10 and S3.11 have been amended to reference an up to date plan (Reference: YAN3000, received 15 January 2015)	✓
The site		
Extent of the surrender application	The operator has provided a plan showing the extent of the site of the facility that is to be surrendered and the extent of the amended Installation boundary. We consider this plan to be satisfactory.	✓
Pollution risk	We are satisfied that the necessary measures have been taken to avoid a pollution risk resulting from the operation of the regulated facility. See key issues section for more information	✓
Satisfactory state	We are satisfied that the necessary measures have been taken to return the site of the regulated facility to a satisfactory state. In coming to this decision we have had regard to the state of the site before the facility was put into operation.	✓