

HARMONDSWORTH LANDFILL SITE

Supporting Planning Statement

To accompany

**A Full Planning Application for the installation of
a leachate pre-treatment plant and piped
connection to sewer at Harmondsworth closed
landfill site.**

Jonathan Wilson

SUEZ Recycling and Recovery UK

March 2020



Project quality assurance information sheet

Harmondsworth Landfill Site, Harmondsworth Lane, Middlesex, UB7 0BF

A Full Planning Application for the installation of a leachate pre-treatment plant and piped connection to sewer at Harmondsworth closed landfill site.

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Appendix B – Extract (Appendix D Method Statement for Vegetation Clearance) from 2013 approved LEMP

1 INTRODUCTION

- 1.1 This Planning Statement has been prepared by SUEZ Recycling and Recovery UK (the applicant) to accompany an application for a leachate pre-treatment plant and piped connection to sewer at Harmondsworth Closed Landfill, Harmondsworth Lane, Middlesex, UB7 0BF. The following provides a description of the site and its surroundings, a description of the proposals, an assessment of the proposals against national and local planning policy and an assessment of the key considerations that need to be considered when determining the application.
- 1.2 Leachate is a liquid which is formed when water passes through waste in a landfill cell. The leachate is currently collected in a leachate holding tank and it is necessary to transport considerable quantities off-site using heavy goods vehicles. The leachate is currently sent by road tanker for disposal at Maple Lodge Treatment Works, Rickmansworth, WD3 9SQ (approximately 3 tankers per week travelling a total distance of over 630 road miles). The more sustainable option for landfill leachate disposal, however, is to discharge direct from the landfill site into mains sewer, where a discharge consent from the statutory undertaker is available. The final destination for treatment of the leachate is the same but by discharging direct to sewer eliminates the need for road tankers to access the closed landfill site, saving circa 630 road miles per week. The proposal therefore will reduce the carbon footprint of the landfill site and complies with local and national policies to reduce climate change impacts. A connection to the sewer has now been agreed with Thames Water Utilities Ltd and SUEZ are keen to see this sustainable solution utilised at the earliest opportunity.
- 1.3 When leachate is pumped directly from within landfilled wastes, it can contain relatively high concentrations of dissolved methane gas which needs to be treated and removed, before it can be safely discharged, in order to prevent build-up of explosive gasses in the sewer. The proposed leachate treatment unit (also termed a 'methane stripping plant' or MSP) will allow leachate generated at the site to be discharged direct to the mains sewer (under a discharge consent agreed with Thames Water Utilities Ltd) which runs close to the north-west corner of the landfill site.
- 1.4 The MSP is a bunded unit which will be located in the north west corner of the Harmondsworth landfill site adjacent to an existing leachate storage tank, as shown on drawing reference **Hsp-SC-0320-01**. The landfill leachate will be pumped from the landfill to the MSP via the existing leachate holding tank and, once stripped of methane, will be transferred to sewer via a new buried pipeline and connection point to the west as shown on drawing reference **Hsp-SC-0320-02**.

2 THE APPLICANT

- 2.1 This application has been prepared and submitted by SUEZ Recycling and Recovery UK, subsidiary of the SUEZ Group. SUEZ recycling and recovery UK is a recycling and resource management company, which serves over 12 million people and handles over 9.9 million tonnes of domestic, commercial and industrial waste each year. SUEZ recycling and recovery UK provides services for over 30,000 public and private sector customers and operates a network of facilities including: recycling, composting, refuse derived fuel production, solid recovered fuel production, wood processing, energy-from-waste and landfill.
- 2.2 SUEZ recycling and recovery UK was established in 1988 and currently employs approximately 5,200 employees and has an annual turnover in excess of £775 million. SUEZ recycling and recovery UK's purpose is to protect the environment by putting waste to good use.
- 2.3 The SUEZ group is at the dawn of the resource revolution. In a world facing rapid demographic growth, urbanisation and a shortage of natural resources, securing, optimising and renewing resources is essential to our future. SUEZ supplies drinking water to 92 million people, provides wastewater treatment services to 65 million, collects waste produced by almost 50 million, recovers 14 million tonnes of waste each year and produces 5.138 GWh of sustainable energy. With 80,990 employees and a presence on all five continents, SUEZ is a key player in the circular economy and the sustainable management of resources.

3 SITE DESCRIPTION

- 3.1 Harmondsworth Landfill is a closed and capped landfill site located in the London Borough of Hillingdon and is situated to the north of Heathrow Airport, approximately 0.6km south of the M4 Motorway and 2.0 km east of the M25 Motorway. The landfill site has largely been restored to agriculture and is currently grazed, with landfill gas and leachate management infrastructure located in the margins of the restored fields where possible, for ease of access and to minimise obstruction to the agricultural use.
- 3.2 The site is bounded by Harmondsworth Lane to the north and Holloway Lane closed landfill site to the north of that. Sipson village lies to the east and an agricultural field to the west. To the south of the site, there exist a mix of different uses including agricultural fields, residential areas, general industrial units and offices with Heathrow Airport located further to the south.
- 3.3 The application site is within the Green Belt and does not have any other statutory landscape or ecological designations.
- 3.4 It is proposed to locate the MSP alongside similar existing leachate management infrastructure in the north-west corner of the landfill, at the former site entrance, as shown on drawing reference **Hsp-SC-0320-01**, where an area of hardstanding remains in place. The MSP is a bunded movable unit which will be installed adjacent to an existing leachate storage tank, as seen in the below photograph, and retained on site as part of the leachate management infrastructure for as long as required to enable safe disposal to sewer of the landfill leachate.

Photograph 1: Proposed location of MSP alongside existing leachate tank



- 3.5 The existing leachate storage tank is painted dark green and is well screened from outside of the wider landfill site by existing perimeter vegetation to the north and by the rising landform of the restored landfill to the south. It sits within the former landfill site entrance area which now forms the agricultural access to the restored field unit, whilst housing the necessary leachate and landfill gas management infrastructure. The existing view from Harmondsworth Lane is shown below on Photograph 2.

Photograph 2: Existing view from Harmondsworth Lane looking south into the former site entrance to Harmondsworth landfill.



4 PLANNING HISTORY

- 4.1 The original planning permission for the site (**43155/89/0520**) was granted on 16/09/1991 for “the extraction of sand and gravel and refilling with inert material and restoration to agriculture”. Restoration designs were agreed on 05/01/1995, reference number **43155/D/93/0932**.
- 4.2 An application for a variation to the phasing and restoration plans was approved on 20/10/1999 (**43155/D/93/0932**). Details pursuant to the aftercare scheme for the restoration of the site was approved on 10/08/2005 (**43155/APP/2000/2595**).
- 4.3 A further variation to enable the site to be fully restored by no later than 30 September 2017 was granted planning permission on 22/02/2013, reference number **43155/APP/2012/1903**. A Landscape and Ecology Management Plan (LEMP) was approved in 2013 under the conditions of this permission and any works on site remain covered by methodologies within this approved plan.
- 4.4 Landfill gas and leachate management and monitoring infrastructure necessarily remains in place until such time as no longer required under the Environmental Permit for the landfill site, as regulated by the Environment Agency.

5 THE PROPOSED DEVELOPMENT

- 5.1 This application seeks to improve the existing leachate disposal system at Harmondsworth Landfill by removing dissolved methane from the leachate on site to enable discharge of the leachate into the nearby mains sewer system under an appropriate discharge consent. As previously outlined, the closed landfill site currently produces leachate which needs to be treated to remove dissolved methane before it can be safely discharged into the main sewer.
- 5.2 The connection point to sewer is approximately 350 metres outside the existing landfill planning permission boundary and consequently not covered by existing planning permissions. SUEZ is therefore applying to Hillingdon Council for planning permission to install a buried pipeline connection to sewer together with an associated methane stripping plant unit (MSP) to pre-treat the leachate prior to discharge.
- 5.3 The MSP is a moveable and fully bunded unit which will be located on the existing hardstanding area in the north west corner of the Harmondsworth landfill site adjacent to an existing leachate storage tank, as shown on drawing reference Hsp-SC-0320-01. The landfill leachate will be pumped from the landfill to the MSP via the existing leachate holding tank and, once stripped of methane, will be transferred to sewer via a new buried pipeline and connection point to the west as shown on drawing reference Hsp-SC-0320-02.

Methane Stripping Plant

- 5.4 The MSP consists of a series of tanks housed within a steel bunded unit of external dimensions 4 metres in length, 1.75 metres in width and 1.1 metres in height. The tanks and associated pipework will extend slightly (0.2 to 0.3m) above the height of the integral bund, as seen in the similar example shown in photograph 2 below. The MSP will be coloured green to match the existing leachate tank and will be located adjacent to it.
- 5.5 There is a very low potential for odour release from the MSP however to further minimise any potential release a carbon filter will be installed on one side of the MSP. The carbon filter will strip potentially

odorous compounds as they pass through a 220-litre drum containing either active carbon or woodchip. The carbon filter drum can be seen on an isometric drawing of the MSP, attached as Appendix A, and would be periodically removed and replaced as required to refresh.

- 5.6 Foam can be generated during the leachate treatment process. To ensure foam does not overflow the MSP, a 220-litre antifoam dosing drum will also be connected to the MSP. The 220-litre antifoam dosing drum will be stored within bunding to contain any potential leaks and can be seen in the isometric drawing in Appendix A.
- 5.7 In addition, a hydrogen peroxide system will be installed alongside the MSP in order to reduce the levels of hydrogen sulphide to meet the consented level in the issued effluent discharge consent. The system, minor in size to the MSP, is also shown on the isometric drawing in Appendix A.
- 5.8 A gantry platform and small ladder are also required to provide access to the MSP for maintenance, as illustrated on the below picture and Appendix A.
- 5.9 Elevations of the MSP are shown on drawing reference **4239-CAU-XX-XX-DR-V-1820 P1**.
- 5.10 Below is a photograph of a similar MSP at SUEZ's Kibblesworth Landfill site in Gateshead, which is located within 1.8m height palisade fencing. The proposed MSP at Harmondsworth will be slightly smaller in size than this example.

Photograph 2: Example MSP



The MSP is to be retained until no longer required for the management of leachate produced within the landfill site. This is most likely to be the point at which the Environmental Permit is surrendered, for which there is no fixed timescale as the permit will remain in place until the site operator can demonstrate that the landfill site presents no further environmental risk. The timescale to remove the MSP once no longer required for leachate management could be controlled within a planning condition. It would not be appropriate to impose a fixed timescale, there being no fixed timescale for Environmental Permit surrender, but a condition requiring removal once no longer required for safe discharge of leachate to sewer would be appropriate.

Pipeline and Mains Sewer Connection

- 5.11 Pipework infrastructure which will provide the connection from the MSP to the foul sewer will also be constructed as part of this application but will be routed below ground.
- 5.12 A new section of buried pipework will connect the proposed MSP to the mains sewer connection point approximately 350 metres away to the west. The route of the pipeline is shown on drawing reference **Hsp-SC-0320-01** and will run to the north of (and outside the root zone of) the established field boundary hedge. The pipeline will not affect the field boundary hedge nor cause damage to tree roots.
- 5.13 SUEZ currently have existing pipelines running beneath the Harmondsworth Lane taking landfill gas from the Harmondsworth landfill to the gas management compound within Holloway Lane landfill to the north.
- 5.14 The buried pipeline will run with the existing landfill gas pipework beneath Harmondsworth Lane, and then run west approximately 350m to connect with the mains sewer.
- 5.15 The pipeline itself will be high-performance polyethylene and will be buried at approximately 1m depth below ground (as required by the Highways Authority).
- 5.16 The pipeline will have an outside diameter of approximately 63mm which provides adequate clearance for jetting. All sections of pipeline will be pressure tested to ensure no leakage.

6 ENVIRONMENTAL CONSIDERATIONS

- 6.1 It is anticipated that the proposals would not result in any significant environmental effects, given that the proposed MSP is a moveable unit which will be located alongside similar infrastructure in the former landfill site entrance area. The main environmental considerations are discussed below.

Transport and Sustainability

- 6.2 Currently heavy goods vehicles transport the collected leachate to a waste-water treatment works. Implementing this proposal would, therefore, result in a significant reduction in traffic generation and constitutes a more sustainable operation, saving around 630 road miles by HGVs every week.

Landscape and Visual

- 6.3 The proposed development is not considered to have any significant landscape or visual impact associated as the pipeline will be buried below ground and the MSP unit is relatively small, moveable, and located in the former landfill site entrance area alongside other necessary environmental management infrastructure. The former site entrance area is at a lower level than the road to the north and screened from it by existing established hedgerow vegetation. The proposed MSP unit will be coloured dark green to match the existing leachate storage tank.

Odour

- 6.4 Odour from leachate may be released through leachate breakouts, damaged monitoring and extraction points, emptying of leachate holding tanks or uncovered storage tanks. Leachate is currently routinely removed from site for off-site disposal via tankers and the leachate transfer process (as well as the associated transport from site) could potentially give rise to odour.
- 6.5 SUEZ do not normally experience odour issues relating to MSPs and leachate management as the systems are sealed and contained. The proposed system of pre-treatment and discharge direct to sewer will have less potential for odour escape than the current method of removal by road tanker, where the most likely source of odour is the air evacuated from the tanker body as it fills up on site.
- 6.6 As previously outlined, whilst not expected to emit odour, the process air exhausted from the MSP at Harmondsworth closed landfill will pass through an odour filter unit as a precautionary measure.

Noise

- 6.7 It is not anticipated that the proposed MSP will have any impact upon noise levels at sensitive receptors. The proposed MSP will be mains powered and is located close to existing landfill gas management infrastructure. Noise generated by the MSP will be barely audible and at a significantly lower level than the nearby gas generation unit and flare.

Flood Risk

- 6.8 The site is located within Flood Zone 1 according to the Environment Agency's online Flood Zone Map. As a result of this and given that the site area is under one hectare, a flood risk assessment is not required to support the planning application.
- 6.9 The MSP unit will be located on an existing area of hardstanding at the former site entrance and the proposed development will not result in increased rates of surface water run off or increase the potential for flooding.

Ecology

- 6.10 The MSP unit will be located on an existing area of hardstanding at the former site entrance, alongside similar infrastructure relating to environmental controls for the landfill site. The installation of a pipeline link to sewer will involve some disturbance to vegetation at the field edge but will be located outside of and to the north of the existing established field edge hedge and its associated root zone.
- 6.11 The existing Landscape and Ecology Management Plan (LEMP) for Harmondsworth landfill site, as approved under conditions 7, 9 & 10 of landfill permission **43155/APP/2012/1903**, will cover all operations within the Harmondsworth landfill site boundary and the minor works involved in installing the piped connection to sewer will follow the same principles of reasonable avoidance measures as enshrined in Appendix D to the approved LEMP (reproduced here in Appendix B).

The proposed development is not anticipated to have any significant impact on ecology.

Green Belt

- 6.12 The proposed MSP and pipeline to sewer is required to more effectively deal with leachate arising as a by-product of the landfilling operation. The plant would process the leachate, stripping it of methane, which would allow it to be safely disposed of to the main sewer. It is therefore a process which supports the wider landfill operation, so is not considered in itself to be inappropriate development. However, regard needs to be had to the impact of the proposed development on the openness of the green belt. It would be a visible feature when viewed locally within the wider landfill site, but is modest in size at

less than 1.5m tall, especially when compared to the existing leachate holding tank. The area in which the MSP is to be located is screened from the road to the north and land to the west by the established field edge hedgerow vegetation. The landform of the restored landfill itself screens the area from other directions. It could be argued that it would be seen as an industrial element impacting upon the openness of the green belt, but when weighed against its discreet siting and small size, together with the context of the greater gain arising from the wider benefit of a safe, restored landfill site and reduced road miles, it is considered that any harm which may arise to the openness of the green belt is clearly outweighed by the greater sustainability benefits. .

7 PLANNING POLICY CONSIDERATIONS

- 7.1. This section reviews relevant planning policy guidance at a national and local level and considers the degree to which the proposals comply with current guidance and policy.

National Planning Policy Framework (2019)

- 7.2. The National Planning Policy Framework (NPPF) published in February 2019 sets out the governments planning policies for England and how these should be applied. The NPPF promotes the **presumption in favour of sustainable development**.
- 7.3. The presumption in favour of sustainable development is outlined in paragraph 11 of the NPPF which states for decision-taking this means approving development proposals that accord with an up-to-date development plan without delay; or where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless: the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.
- 7.4. The proposed development represents sustainable development as it removes the need for heavy goods vehicles to tanker leachate away from the site. The development is therefore in accordance with the overall aims of the policy as the carbon footprint of the site will be reduced.

National Planning Policy for Waste (2014)

- 7.5. National Planning Policy for Waste (NPPW) sets out the government's detailed planning policies for waste in order to work towards the objectives of the Waste Management Plan for England.

- 7.6. The document states within paragraph 1 that the key objectives of waste planning policy are to drive waste management up the hierarchy, provide a framework in which communities can take more responsibility for their own waste and to enable more materials to be re-used, recycled and recovered.
- 7.7. Paragraph 7 states that Waste Planning Authorities should concern themselves with implementing the planning strategy and not with the control of processes which are a matter for pollution control authorities.
- 7.8. Appendix B of NPPW sets out 'locational criteria' that should be taken into account when considering the siting of waste management proposals. The criteria are outlined below:

- Protection of water quality and resources and flood risk management;
- Land instability;
- Landscape and visual impacts;
- Nature conservation;
- Conserving the historic environment;
- Traffic and access;
- Air emissions including dust;
- Odours;
- Vermin and birds;
- Noise, light and vibration; and
- Litter.

- 7.9. It is considered that the proposals will comply with Appendix B.

Local policy

- 7.10. This section of the planning statement outlines the main policies for consideration that make up the Hillingdon Local Plan Part 1 and Part 2 and the London Plan 2016.

Hillingdon Local Plan: Part 1 (2012)

- 7.11. The London Borough of Hillingdon Local Plan Part 1 was adopted in November 2012 and provides a strategic vision for the Borough up to 2026. Relevant policies to the proposal are discussed below.

-
- 7.12. **Policy EM1 – ‘Climate Change Adaptation and Mitigation’** has regard for climate change adaption and reduction and states that development should include initiatives to reduce vehicle dependencies.
- 7.13. As previously outlined, discharging leachate directly into the main sewers will reduce the need for heavy goods vehicles to tanker the leachate away. This proposal will therefore reduce the carbon footprint of the landfill site and actively supports the above policy to aid climate change.
- 7.14. Policy **EM2 ‘Green Belt, Metropolitan Open land and Green Chains’** states that the Council will seek to maintain the current functions of the Green Belt and that any development within the Green Belt will be considered against national and London Plan policies.
- 7.15. As outlined in section 6 to this supporting statement, the proposed development is not considered in itself to be inappropriate development in the green belt, given its links to the needs of the existing landfill site, but impacts on openness nevertheless require to be considered. The MSP unit is small in size and located on an existing area of hardstanding alongside an existing leachate holding tank. The area is screened from the road to the north and land to the west by the established field edge hedgerow vegetation. The landform of the restored landfill itself screens the area from other directions. The proposed development is not considered to impact significantly on the openness of the green belt, nor is it considered to conflict with green belt policy.
- 7.16. Policy **EM6 ‘Flood Risk Management’** requires that development should adequately mitigate against the increased risk of flooding.
- 7.17. As previously outlined, the proposed development is located within Flood Zone 1 (an area with a low probability of flooding) according to the Environment Agency’s online Flood Zone Map. It is not anticipated that the proposals will increase the flood risk to the area and therefore comply with the above policy.
- 7.18. Policy **EM7 ‘Biodiversity and Geological Conservation’** states that biodiversity and geology will be preserved.
- 7.19. The site is not subject to any ecological designations and it is not considered that the proposed development will cause any significant implications to the biodiversity and conservation of the area. There

will be no disturbance to the root zone of existing hedge vegetation and adherence to the methodologies in the existing approved LEMP for Harmondsworth landfill site will ensure appropriate protection of ecology.

- 7.20. Policy **EM11 ‘Sustainable Waste Management’** requires the adequate mitigation and management of waste arising from a development.

The proposed MSP will allow the leachate generated at the landfill site to be discharged direct to the mains sewer, this is the preferred and the most sustainable method for leachate management within the UK. This method eradicates the need for leachate to be tankered offsite, reducing 630 vehicle miles travelled per week. The proposal therefore actively supports the above policy.

Hillingdon Local Plan: Part 2 (2020)

- 7.21. The London Borough of Hillingdon Local Plan: Part 2 was adopted January 2020 and delivers the details of the strategic policies set out in Part 1. Relevant policies to the proposal are discussed below.
- 7.22. Policy **DME1 4 ‘Development in the Green Belt or on Metropolitan Open land’** reiterates that inappropriate development will not be permitted unless there are very exceptional circumstances, while noting that redevelopment on sites will be permitted only where they would not harm openness or conflict with the purposes of including land within the Green Belt. As outlined above, the proposed development is not considered to impact significantly on the openness of the green belt, nor is it considered to conflict with green belt policy.
- 7.23. Policy **DME1 7 ‘Biodiversity Protection and Enhancement’** states the appropriate surveys and assessments must accompany development with biodiversity or ecological implications, and these must be protected or enhanced. For reasons described in section 6 above there are not considered to be any significant biodiversity or ecological implications associated with the proposed development and the proposals are considered to accord with this policy.

The London Plan 2016

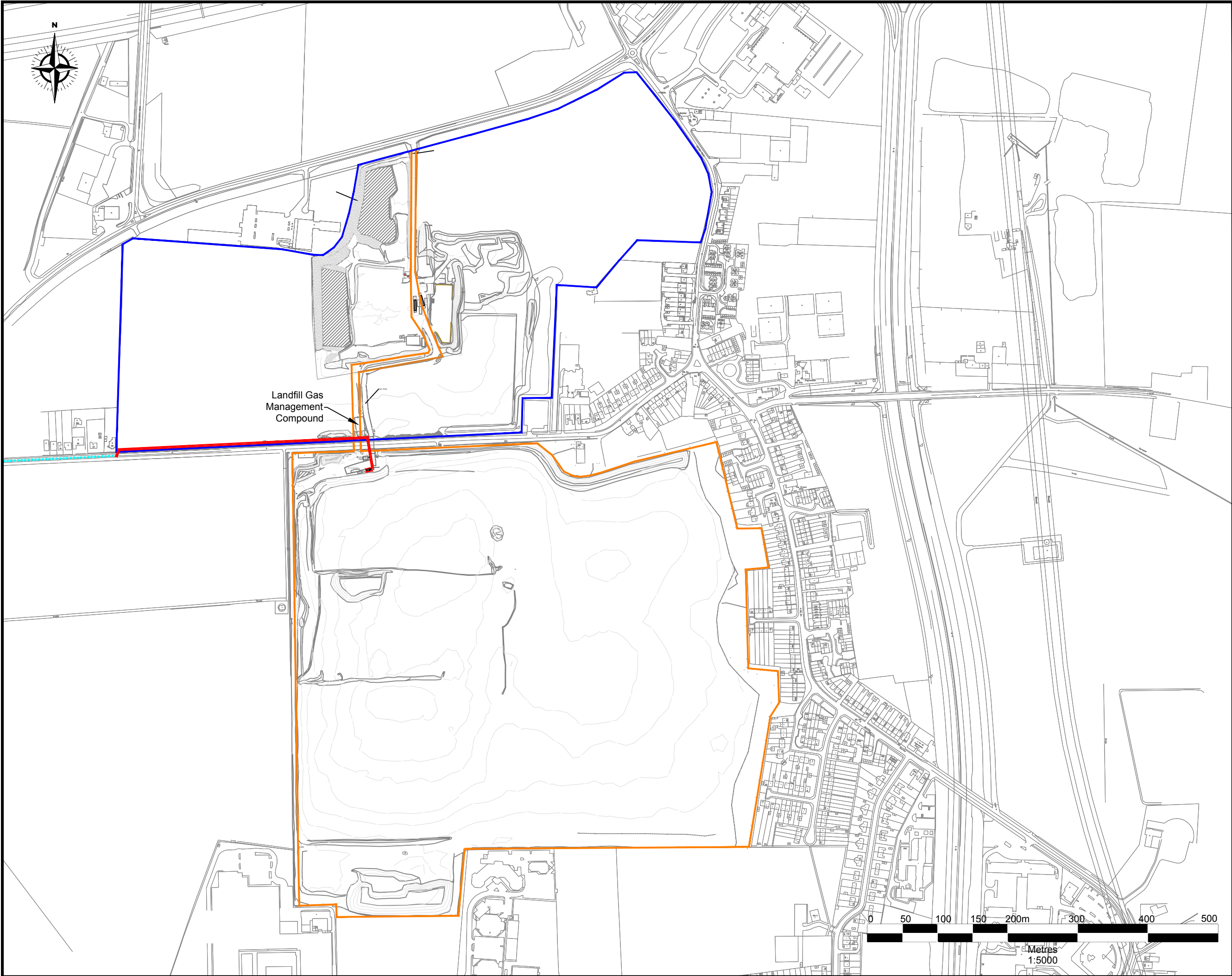
- 7.24. The London Plan 2016 is the spatial development strategy produced by the Mayor of London. Strategic planning in London is the shared responsibility of the Mayor of London, 32 London boroughs and the Corporation of the City of London. Under the legislation establishing the Greater London Authority (GLA), the Mayor has to produce a spatial development strategy (SDS) – which has become known as ‘the London Plan’ – and to keep it under review. Boroughs’ local development documents have to be ‘in general conformity’ with the London Plan, which is also legally part of the development plan that has to be taken into account when planning decisions are taken in any part of London unless there are planning reasons why it should not. The 2016 London Plan is the extant spatial development strategy document for the Greater London area.
- 7.25. The relevant policies to the proposed development in the London Plan overlap those already mentioned above. It is anticipated that the proposed development will comply with the remaining policies set out within the plan.

8 CONCLUSION

- 8.1 The proposals which are the subject of this application have been designed to improve efficiency and sustainably of leachate management at Harmondsworth closed landfill. The proposal will reduce the carbon footprint of the landfill site, by saving around 630 road miles travelled by HGVs each week and complies with local and national policies including those to reduce climate change impacts.
- 8.2 The development has been designed and located in order to minimise visual impact and to fit with the wider site design.
- 8.3 Taking the above into account it is considered that the proposed development is in compliance with the Development Plan and should be approved by Hillingdon Council at the earliest opportunity.



DRAWINGS



Notes

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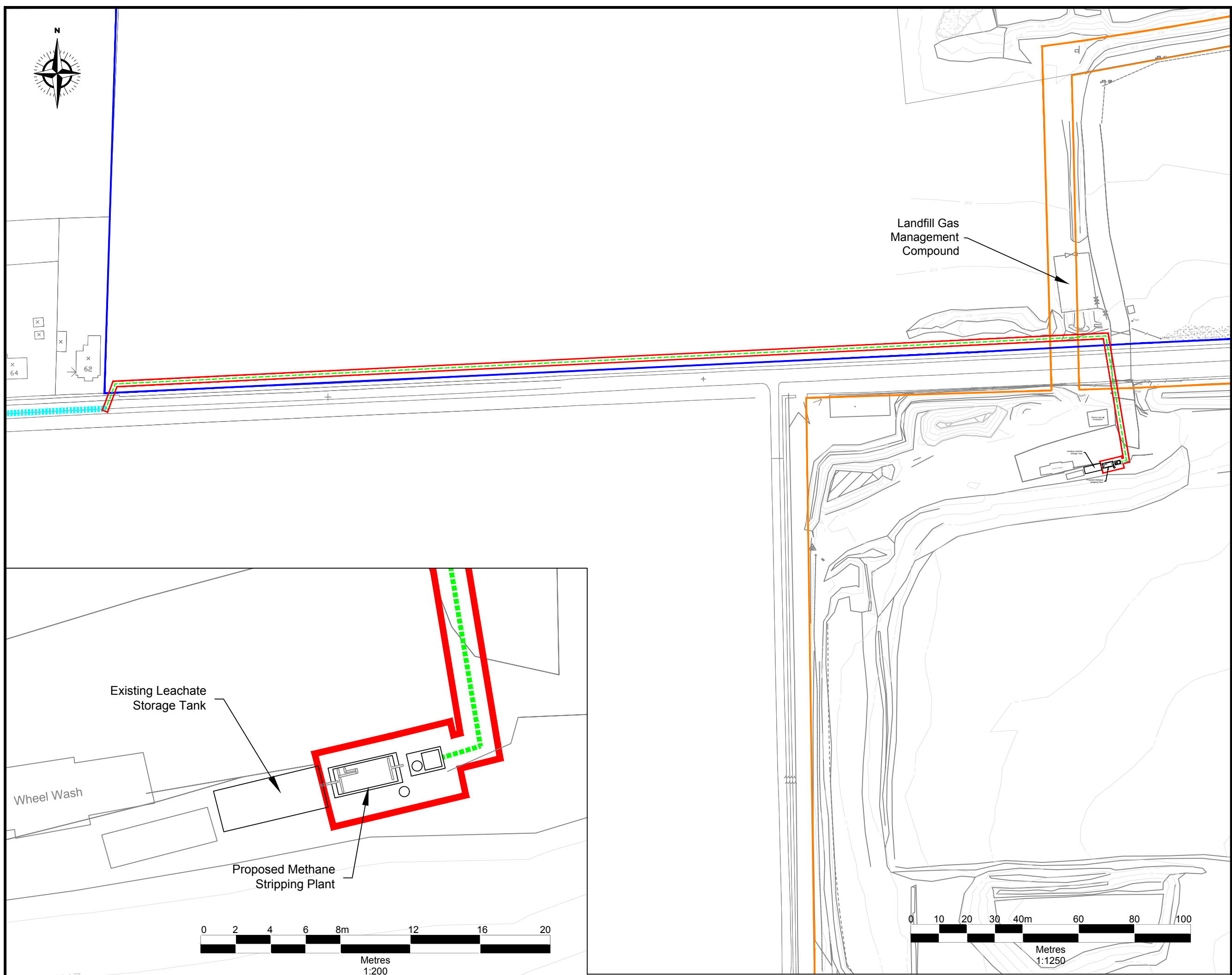
- Harmondsworth Landfill Site & Quarry
- Land within SUEZ Ownership
Holloway Lane Quarry & Landfill Site
- MSP / Pipeline Application Boundary
- Existing Thames Foul Sewer Network

Rev	subject	date



Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP
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Site	
Harmondsworth Landfill Site	
Title	
Proposed MSP/Sewer Connection Location Plan	
Scale	
1:5000 @ A3	
Date	
March 2020	
Drawing Ref	Drawn by
Hsp-SC-0320-01	ST
	Checked by
	AW



Notes

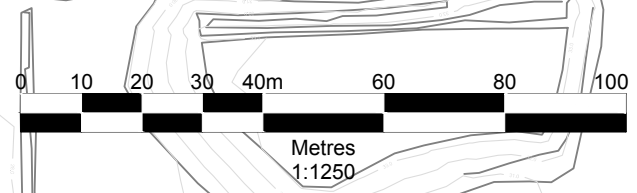
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- Harmondsworth Landfill Site & Quarry
- Land within SUEZ Ownership
Holloway Lane Quarry & Landfill Site
- MSP / Pipeline Application Boundary
- Existing Thames Foul Sewer Network
- Proposed MSP Discharge Pipe

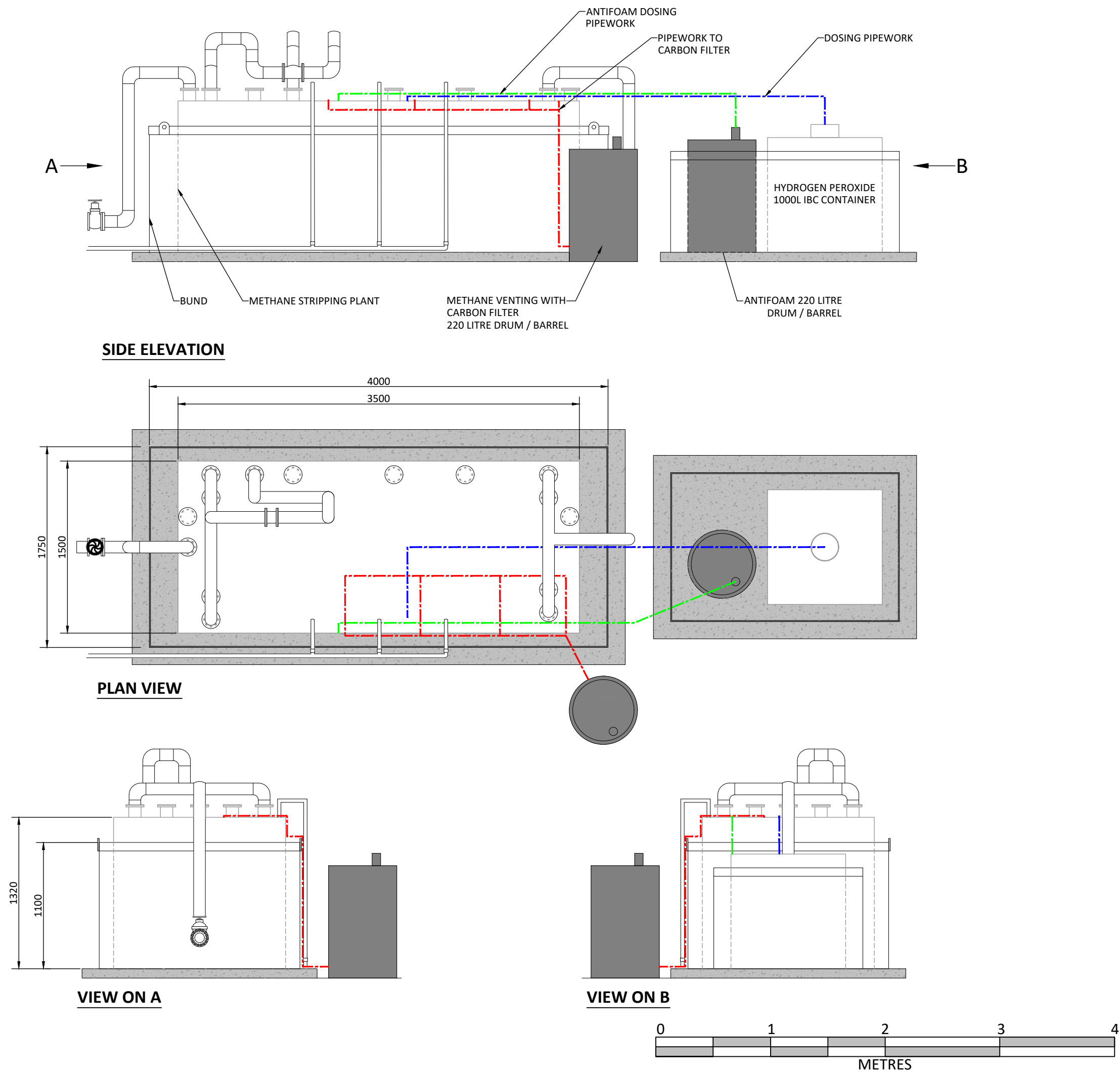
Rev	subject	date

Darwen Resource Recovery Park, Lower Eccleshill Road, Darwen, BB3 0RP
Tel: (01254) 819700, Fax: (01254) 819740, Email: richard.bisset@sita.co.uk

Site	
Harmondsworth Landfill Site	
Title	
Proposed MSP/Sewer Connection Site Layout	
Scale	
1:1250 & 1:200 @ A3	
Date	
March 2020	
Drawing Ref	Drawn by
Hsp-SC-0320-02	ST
	Checked by
	AW



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P1	ISSUED FOR INFORMATION	EJD	KB	AS	04.03.20
REV	MODIFICATIONS	BY	RE	AP	DATE
PURPOSE OF ISSUE FOR INFORMATION				STATUS S2	
CLIENT: 					
PROJECT: HARMONDSWORTH LANDFILL SITE					
TITLE: METHANE STRIPPING PLANT ASSEMBLY ELEVATIONS					
DESIGNED BY SUEZ	DRAWN BY EJD	REVIEWED BY KB	AUTHORISED BY AS		
DATE 03.03.2020	SCALE @ A3 1:30	JOB REF: 4239	REVISION P1		
DRAWING NUMBER 4239-CAU-XX-XX-DR-V-1820					
					



APPENDICES

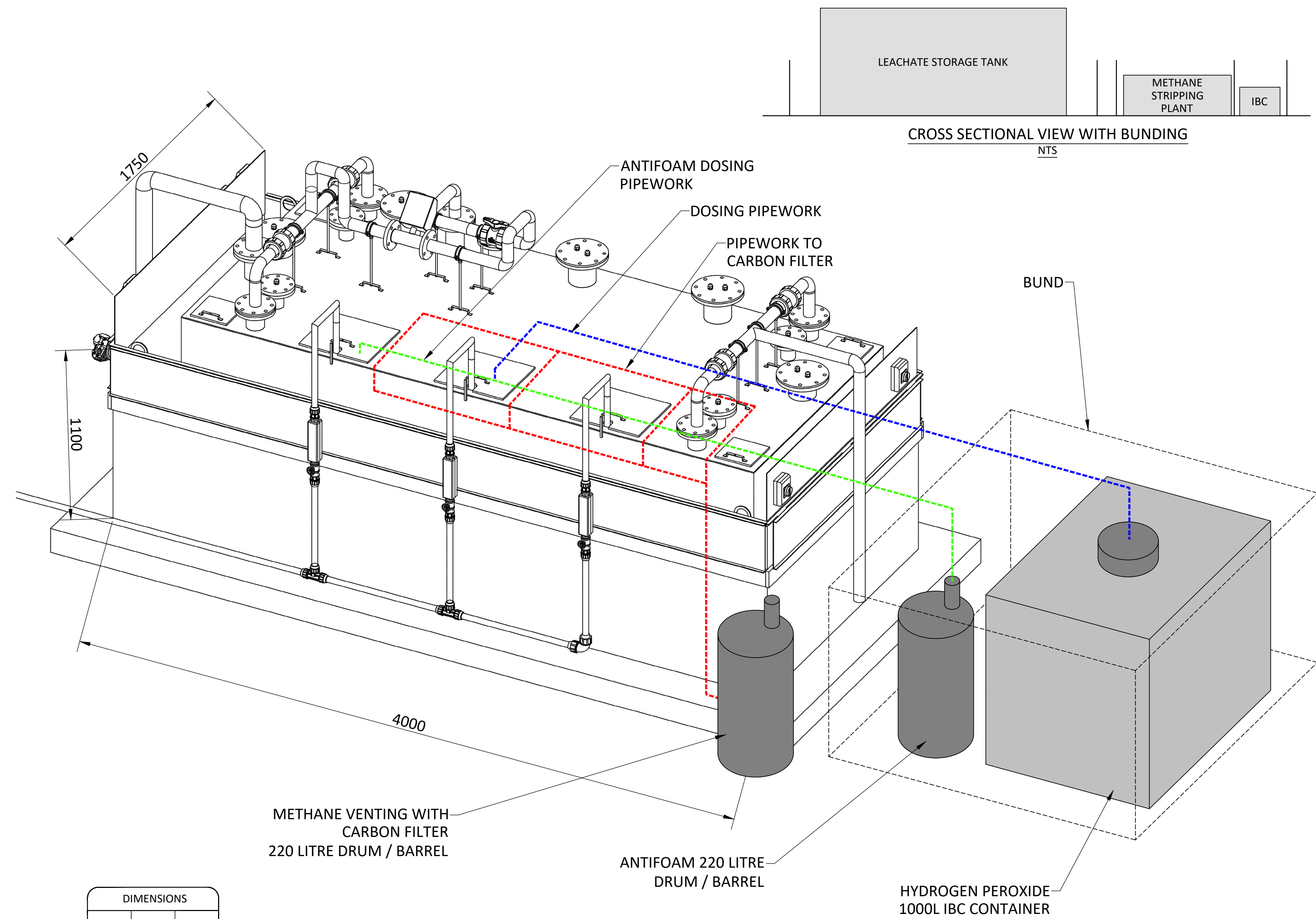


APPENDIX A

NOTE

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DIMENSIONS			
	LENGTH	WIDTH	HEIGHT
BUND	4m	1.75m	1.1m
TANK	3.5m	1.5m	1.32m
LS TANK BUND	10m	3m	1.8m

P2	DIMENSIONS UPDATED	EJD	KB	AS	04.03.20			
P1	ISSUED FOR INFORMATION	EJD	KB	AS	19.02.20			
REV	MODIFICATIONS	BY	RE	AP	DATE			
PURPOSE OF ISSUE FOR INFORMATION					STATUS S2			
CLIENT: 								
PROJECT: HARMONDSWORTH LANDFILL SITE								
TITLE: METHANE STRIPPING PLANT ASSEMBLY								
DESIGNED BY KB	DRAWN BY EJD	REVIEWED BY KB	AUTHORISED BY AS					
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APPENDIX B



APPENDIX D

Method Statement for Vegetation Clearance

METHOD STATEMENT FOR Vegetation Clearance

OVERVIEW

Location	Harmondsworth Landfill, Harmondsworth Lane.
Objective	Golder Associates (UK) Ltd (Golder) was commissioned by SITA UK to develop a reptile mitigation strategy as defined in condition 7 of the planning conditions associated with planning permission, consent 43155/APP/2012/1903 7 August 2012. A reptile survey was undertaken by Golder in 2012 and a small population of viviparous lizard was identified. This method statement outlines procedures that should be followed to facilitate the restoration of the landfill by removal of the northern bund that provides suitable habitat for viviparous lizard.
Timeframe	■ Habitat manipulation involving vegetation clearance for reptiles on northern bund (November through to late February). ■ Hibernacula destructive searches and placement of artificial refugia (March – May). ■ Vegetation clearance on other parts of the site (September to February).
Personnel Required	■ Ecological Clerk of Works ECoW (x1) – Golder Associates UK Ltd. (Golder). ■ Biodiversity Champion Appointed by ECoW – SITA UK. ■ Labourer (x1) who can competently operate a strimmer, mower or chainsaw as required.

HEALTH & SAFETY

General Hazards	General Safety Controls
■ Bites and stings. ■ Cuts and abrasions. ■ Flying debris. ■ Excessive noise. ■ Slips, trips and falls. ■ Weather – cold/hot. ■ Specific hazards are identified along with each key step below.	■ Golder Associates Health and Safety Environment Plan (HASEP). ■ SITA operator certified in the safe use of a strimmer, mower or chainsaw (as required). ■ Standard Personal Protective Equipment: hard hat, eye protection, high visibility clothing, safety footwear to be utilised throughout all operations described. Specific safety controls are identified along with each key step below.



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PROCEDURE: Vegetation Clearance

Key Steps		Personnel	Equipment	Specific Hazards	Specific Safety Controls
1. Toolbox Talk for vegetation clearance along northern bund.	Prior to vegetation clearance: ■ Deliver Toolbox Talk to strimmer or mower operator and Biodiversity Champion. ■ Record attendance of all personnel in accordance with the Commitment to Environmentally Safe Working Practices (See Appendix E).	Golder ECoW.	None	None	None
2. Strim or mow grassland on northern bund.	During dry conditions between November and mid-February: ■ Strim or mow grassland on northern bund to a height of 3 to 5 cm from the ground. ■ Remove arisings from the bunds. ■ Do not disturb any potential hibernacula such as grass tussocks, rubble piles or dead wood.	Golder ECoW / Strimmer or mower operator.	■ PPE ■ Strimmer / mower	■ Strimmer / mower. ■ Manual handling. ■ Slips, trips and falls. ■ Cuts and abrasions.	■ Operator certified in the safe use of a strimmer or mower. ■ Face shield. ■ Ear protection. ■ Work gloves. ■ Trousers and long-sleeved clothing.
3. Destructive search of hibernacula.	In spring (March – May) when reptiles are active: ■ Place artificial refugia in targeted locations to entice reptiles away from potential existing hibernacula. ■ As far as is reasonably practicable, search any potential hibernacula including grass tussocks, rocks and dead wood on the northern bund for reptiles. ■ Capture and relocate all reptiles to artificial refugia.	Golder ECoW / Strimmer or mower operator.	■ PPE ■ Strimmer / mower	■ Strimmer / mower. ■ Manual handling. ■ Slips, trips and falls. ■ Cuts and abrasions.	■ Operator certified in the safe use of a strimmer or mower. ■ Suitable footwear.



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	Manually destroy hibernacula to prevent reptiles returning onto bund including strimming grass tussocks.				- Long-sleeved clothing. - Work gloves.
4. Clear small trees and scrub throughout the site.	Between September and February: - Cut all small trees and saplings to ground level. - Cut timber into 1.5 m long sections and retain wood to be used in creation of reptile hibernacula. Stop work if any species are found whose habitat is legally protected and consult the ECoW (see Appendix E for Tool Box Talk).	Chainsaw / Strimmer operator.	Chainsaw / Strimmer;	- Strimmer / mower. - Manual handling. - Slips, trips and falls. - Cuts and abrasions.	- Operator certified in the safe use of a strimmer or chainsaw. - Face shield. - Ear protection. - Work gloves. - Trousers and long-sleeved clothing.