



## **Waste Recovery Plan**

Radlett, SRFI Area 2

August 2023

**Waterman Infrastructure & Environment Limited**

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### Quality Assurance – Approval Status

This document has been prepared and checked in accordance with  
Waterman Group's IMS (BS EN ISO 9001: 2015, BS EN ISO 14001: 2015 and BS EN ISO 45001:2018)

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<b>Issue</b>	<b>Date</b>	<b>Prepared by</b>	<b>Checked by</b>	<b>Approved by</b>
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**Comments**

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**Comments**

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## Disclaimer

This report has been prepared by Waterman Infrastructure & Environment Limited, with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporation of our General Terms and Condition of Business and taking account of the resources devoted to us by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

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## 1. Introduction

### 1.1 The Brief

HELIOSLOUGH LIMITED (client) instructed Waterman Infrastructure & Environment Limited (Waterman) to prepare a Waste Recovery Plan (WRP), demonstrating waste recovery for site-derived waste to be used in the construction of landscape bunds associated with the construction of the Radlett Strategic Rail Freight Interchange (SRFI). The bunds are to be constructed at Area 2, located at North Orbital Road, Upper Colne Valley, Hertfordshire, AL2 2ET.

### 1.2 Structure and Scope

This WRP has been constructed in line with the latest guidance<sup>1</sup> from the Environment Agency (EA) for the permanent deposit of waste on land as a recovery activity.

### 1.3 Limitations and Constraints

The benefit of this report is made to HELIOSLOUGH LIMITED.

Waterman has endeavoured to assess all information provided to them during this work but makes no guarantees or warranties as to the accuracy or completeness of this information.

The scope of this investigation does not include an assessment for the presence of asbestos containing materials within or below buildings or in the ground at the Site.

The conclusions resulting from this study are not necessarily indicative of future conditions or operating practices at or adjacent to the Site.

<sup>1</sup> Guidance available from <https://www.gov.uk/government/publications/deposit-for-recovery-operators-environmental-permits/waste-recovery-plans-and-deposit-for-recovery-permits> (accessed February 2023)

## 2. Background and Context

### 2.1 Strategic Rail Freight Interchange Scheme

#### 2.1.1 Introduction

The British logistics industry supports the majority of economic sectors, generating over £90 billion in annual revenue. A specific aspect of the industry, rail freight, has become a significant driver of economic growth. As such there is an operational need for Strategic Rail Freight Interchanges (SRFI) to optimise the transfer of goods between road and rail, and hence reduce the costs and environmental impact of transport.

Through the Radlett SRFI scheme HELIOSLOUGH LIMITED proposes to develop an intermodal terminal, with rail and road distribution units located to the south of St. Albans, adjacent to the M25 and Midland Main line (MML) railway. The terminal will be serviced by a new dual track rail chord connected to the MML.

The SRFI site comprises a 419-hectare (ha) development area that is sub-divided into eight plots referred to as Areas 1 to 8. The areas have the following proposed uses:

- Areas 1 (146 ha) and 2 (26 ha) – the SRFI Development Area. Area 1 will comprise an intermodal terminal and a rail and road served large distribution facility consisting of several large warehouses. The rail chord connecting Area 1 to the MML will run through Area 2. Area 2 will also feature two landscape bunds that will help to screen the SRFI from public view.
- Area 3 to 8 (247 ha) – will be developed with additional works and landscaping to provide publicly accessible open land and a community forest.

The SRFI site exists wholly within the City and District of St Albans.

Plan showing the location of the SRFI and each Area's redline boundary has been included in Appendix A.

#### 2.1.2 Master Developer and Delivery Team

HELIOSLOUGH LIMITED is the master developer – it is the party responsible for bringing the scheme to fruition. It has and will appoint relevant technical advisors (e.g. civil engineers, geo-environmental consultants) and construction contractors to design and build the development. The first phase of work includes designing and creating the earthworks, with highway and rail infrastructure following on before the warehouses are constructed. There is overlap in timing between these phases and the technical advisors and contractors involved.

Of relevance to the WRP, Waterman is appointed to advise HELIOSLOUGH LIMITED on landscape bund design and ground conditions and VolkerFitzpatrick is appointed to carry out the detailed design and execution of the earthworks.

#### 2.1.3 Planning Context

The Radlett SRFI scheme benefits from outline planning consent granted on appeal by the Secretary of State for Communities and Local Government (Ref: APP/B1930/A/09/2109433, July 2014). The outline planning permission has reference 5/2009/0708. The description of development is:

*"construction of a Strategic Rail Freight Interchange (SRFI) comprising an intermodal terminal and rail and road served distribution units (331,665m<sup>2</sup> in Use Class B8 including ancillary B1/B2 floorspace) within Area 1, with associated road, rail and other infrastructure facilities and works within Areas 1 and 2, (including earth mounds and a Park Street/Frogmore relief road) in a landscaped setting, and further landscaping and other works within Areas 3 to 8 inclusive to provide publicly accessible open land and community forest, at land in and around Former Aerodrome, North Orbital Road, Upper Colne Valley, Hertfordshire".*

Three Reserved Matters Applications (RMAs) were subsequently submitted to and approved by the Local Planning Authority (LPA) St Albans City & District Council:

- Landscape RMA reference 5/2017/1995 approved 15 May 2018
- Infrastructure RMA reference 5/2017/1938 approved 15 May 2018
- Development Site RMA reference 5/2016/3006 approved 15 May 2018

Following its initial review of the WRP (June 2023 version), the EA raised questions relating to the planning requirements for the landscape bunds. The project planning advisor, RPS, has prepared further, more detailed information, presented as Appendix B. The various documents referred to in the RPS analysis are provided separately.

#### 2.1.4 Earthworks Overview and Programme

The earthworks across Areas 1 and 2 will be undertaken concurrently from spring 2024 to summer 2026. The majority of the cut will be taken from the northern part of Area 1 – both to reduce its level and to create surface water flow attenuation features. The cut will be used to raise levels across the south of Area 1 (so leading to an overall level development platform for the new warehouses), and to construct landscaping bunds on Area 2 (LS1 and LS2) and on Area 1 (LS3 – 9). Area 2 will also be subject to cut – to create the route for the new rail chord to cross Area 2 and pass under the MML. The cut in Area 2 will include excavating historically landfilled waste.

Works on Area 2 will begin with construction of the Jack Box for the new underpass. This will be followed by earthworks to excavate the route of the new rail chord including historic landfill underlying part of the route. The larger of the two landscape bunds on Area 2 – LS1 – will be constructed over the two-year period with earthworks occurring in campaigns as cut is available and the weather is likely to be most favourable. LS2 – the smaller, northern bund, will be constructed in 2026.

The historically landfilled waste will be processed on site (regulated by separate mobile treatment EP) to recover usable earthworks material for use in bund construction. Soils arising from cut in Area 1 and from cut in Area 2 outside the historic landfills will also be used.

Other bunds to be constructed around Area 1 will be constructed using soils from the northern part of Area 1. Such soils will either be excluded from the scope of waste (uncontaminated soil and other naturally occurring material excavated in the course of construction activities where it is certain that the material will be used for the purposes of construction in its natural state on the site from which it was excavated<sup>2</sup>) or will be suitable for use in accordance with the CL:AIRE Definition of Waste: Development Industry Code of Practice (DoWCoP). All non-waste material will be managed in accordance with the DoWCoP to enable lines of evidence to be clearly maintained.

## 2.2 Summary of Existing Site Conditions and Remediation Strategy

Area 2 has been the subject of detailed environmental assessments conducted to support the development of the landscape bunds and construction of the rail chord. The summary that follows has been compiled from the following documents:

- Capita Ground Contamination Assessment and Remediation Strategy – Area 2, dated October 2016 (Ref: CS-070751-PE-16-143-R, Rev. C);
- Capita Controlled Waters Detailed Quantitative Risk Assessment – Area 2, dated January 2017 (Ref: CS070751-CAP-00-XX-RP-Y-CWDQRA, Rev 2.0);
- Capita Remediation Options Appraisal dated August 2018 (Ref:CS-070751-PE-18-075-R);
- Bradbrook Remediation Contingency Plan, Radlett Strategic Rail Freight Interchange Area 2, dated April 2019 (Ref 18-175)

<sup>2</sup> Article 2 paragraph 1(c) Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives

- Waterman Ground conditions Report Radlett Area 2 dated January 2023 (Ref: RAD-WAT-A2EX-XX RP-I-0003).

These documents are available on request.

### 2.2.1 Current Site Conditions

Area 2 is centred on Ordnance Survey Grid Reference TL 16114 03242.

To the immediate northeast of Area 2 is agricultural land, followed by the Napsbury park residential area. The southern border is bounded by the M25. On the western boundary is the MML and beyond lies Area 1. A site location plan of Area 2 is included in Appendix A.

Area 2 is comprised of restored agricultural grassland that is now disused and inaccessible to the public. It is accessible by a concrete track that runs from a bridge in the southeast corner, which passes over the M25, to an underpass (below the MML) towards Area 1, in the northwest.

Area 2 is within the London Metropolitan Green Belt.

### 2.2.2 Site History

Area 2 has been subject to two instances of mineral extraction, in its eastern and southern extent, that occurred in latter half of the 20<sup>th</sup> Century. The extraction operations have since ceased and were infilled in the 1980's under two separate waste management licences. The land from then on has been largely unused and its layout unchanged.

#### *Landfills*

The two parts of Area 2 that underwent sand and gravel extraction were restored by landfilling. The table below sets out information regarding the landfills. The extent of the historic landfills in Area 2 are shown in an extract of a Groundsure report (Appendix C).

Table 1: Historical landfill sites

Name	Location	Licence Number	Waste type permitted	Licence Dates
Napsbury tip	Eastern boundary	78/48	inert, commercial, household waste	1978 - 1981
Old Parkbury	Southern boundary	77/20	inert, commercial, household, domestic putrescible solid, non-putrescible and non-hazardous solid, rubble and excavated spoil	1954 - 1983

### 2.2.3 Site Topography

The topography of Area 2 is relatively flat at 68m Above Ordnance Datum (AOD), except for the western edge which slopes significantly due to the MML railway embankment, reaching 74m AOD.

### 2.2.4 Geology, Hydrogeology and Hydrology

The completed ground investigation has recorded the following ground conditions:

- geology in landfilled areas;
  - Topsoil 0.1m 0-0.4m thick;
  - Made Ground / General Fill 0.1m – 1.85m thick;
  - Made Ground / Landfill Capping 0.1m – 2.5m thick;
  - Made Ground / Landfill 0.2m – 5.7m thick;
  - Made Ground / Basal Clay Layer 0.25m – 3.0m thick;
  - Kesgrave Catchment Subgroup;

- 0.8m – 9.0m thick (Cohesive);
- 0.6m – 4.6m thick (Granular);
- Chalk;
  - 0.85m – 12.1m thick (Structureless);
  - >11.95m (total thickness not proven) (Structured).
    - Geology in non-landfilled areas
- Topsoil 0.05m – 0.6m thick;
- Made Ground – General Fill 0.2m – 2.95m thick;
- Kesgrave Catchment Subgroup
  - 3.0m – 8.2m thick (Cohesive);
  - 1.8m – 13.8m thick (Granular);
- Chalk;
  - 0.9m – 10.3m thick (Structureless);
  - >16.05m (total thickness not proven) (Structured).

The Chalk Formation<sup>3</sup> underlying Area 2 is classified as a Principal Aquifer and the superficial Kesgrave deposits are characterised as a Secondary A aquifer. Area 2 is within groundwater Source Protection Zone (SPZ) 1 (Inner Zone) and SPZ 2 (Outer Zone), relating to an abstraction point 1km to the south/southwest.

Area 2 has multiple surface water bodies present in the form of a series of small ditches that cross the centre of the site from west to east, up to the eastern boundary, these remain dry during the summer months. Nearby surface water bodies include the Rivers Colne and Ver, to the east and southwest respectively. There are also multiple lakes that are 200m to 325m to the south.

## 2.2.5 Summary of Remediation Strategy

A Remediation Strategy for the works proposed in Area 2 was prepared by Capita in 2016. Following liaison with the EA further Detailed Quantitative Risk Assessment was carried out also by Capita to assess if the proposed landscape bunds above the existing historic landfills would create a risk to groundwater quality. This was followed by the preparation of a Remediation Options Appraisal (ROA) by Capita to determine a suitable remedial approach if the bunds did in fact impact the concentration of ammoniacal nitrogen in groundwater. The ROA concluded the most appropriate remedial approach would be to abstract the impacted groundwater down gradient of the bunds, treat to remove ammoniacal nitrogen and discharge the treated water to an infiltration trench. Further details regarding the groundwater abstraction and treatment system were provided in a Remediation Contingency Plan prepared by Bradbrook.

The Remediation Strategy (Capita), DQRA (Capita), ROA (Capita) and Remediation Contingency Plan (Bradbrook) have been approved by St Albans pursuant to Condition 24.1 of planning permission 5/2009/0708.

Waterman has prepared a Detailed Remediation Method Statement (DRMS) which sets out in more detail how the works in Area 2 will take place, including the use of recovered waste to construct the landscape bunds. The DRMS confirms the criteria for the use of recovered waste in the landscape bunds as being that it must be classified as non hazardous waste (to enabling permitting as a waste operation rather than an installation) and also defines the frequency of testing of recovered waste to be used in the landscape bunds.

<sup>3</sup> The Lewes Nodular Chalk Formation and Seaford Chalk Formation.

The DRMS also includes details with respect to the excavation of the historic landfill waste beneath the footprint of the proposed rail chord, the use of engineered fill to construct the rail chord embankment, the details of groundwater and ground gas monitoring and additional risk assessment and monitoring to be carried out before instigating the contingency plan. The DRMS has also been prepared with the benefit of VolkerFitzpatrick having been appointed by the client.

At the time of writing, the DRMS is currently in the process of being agreed with the EA Hertfordshire and North London team prior to formal submission to the planning authority. Once agreed with the local EA office this document will be submitted to the national permitting team.

### 3. Waste Recovery Assessment

#### 3.1 Purpose of the Work

The Development aims and the need for the scheme are laid out above in section 2.1.

The waste recovery assessment is limited to the landscape bunds LS1 and LS2 on Area 2.

The proposed development for Area 2 includes the erection of two landscape bunds, a smaller one to the north between the new rail chord and the MML (LS2) and a larger one along the eastern boundary of Area 2 (LS1). The purpose of the bunds is to provide a screen to reduce the visibility of the intermodal terminal and associated infrastructure, including the railway chord, and to provide some acoustic screening.

The process for developing the landscape bunds is detailed below.

The proposed waste recovery area boundary covers the two discrete footprints of the bunds LS1 and LS2. A plan showing the proposed EP boundary is included in Appendix A.

#### 3.2 Waste to be Used

##### 3.2.1 Quantity of Waste

The software package Civil3D has been used to calculate the various types and quantities of earthworks material to arise and be used. The package enables the calculation of volumes between two surfaces.

The starting point surface is based on existing topographic survey data minus 300mm for existing topsoil to be stripped first. The finishing point surface is based on the surface level of the completed bunds. The software then calculates the volume between the two surfaces across the study area.

A plan and cross sections for the bunds in Area 2 are included in Appendix A.

The height of the bunds has been determined as explained in section 2.1 above. This waste recovery plan assumes the entire fill volumes of the bund LS1 (up to 347,705.20m<sup>3</sup>) and LS2 (up to 44,741.25m<sup>3</sup>) based on concept earthworks design levels) could be satisfied with site-derived waste. Based on a conversion factor of 2.0 tonnes per m<sup>3</sup> for the waste, the maximum quantity of waste is given as 784,892.91 tonnes. These quantities allow for “topping up” of the bunds. Detailed settlement analysis has been undertaken to estimate the quantity of waste that may need to be added to the bunds to maintain their height on the assumption the bunds will settle due to the underlying ground conditions. The EP application will include further details on this aspect.

For the avoidance of doubt, the final quantity of waste to be used will be limited by the required final surface levels of the landscape bunds.

##### 3.2.2 Waste Types

The wastes to be used will all arise from earthworks (cut) at the Radlett SRFI site. The waste will be limited to non-hazardous waste and will need to meet the chemical and physical specification set out below. The wastes will arise from two distinct earthworks activities.

Area 2 is underlain in part by historic landfills. To construct the new rail chord, excavation into historic landfill is required. Ground investigation findings have established that useable earthworks material can be extracted from the historic waste by mechanical screening and handpicking. The treatment will be regulated by mobile treatment permit; therefore, the products of treatment will be coded as wastes arising from the mechanical treatment of waste (Chapter 19 of the EWC). Waste unsuitable for use in the bunds will be separated during the treatment process and sent to an appropriate permitted facility for recovery or disposal.

The remainder of the fill need for the bunds will be supplied primarily by excavations to reduce ground levels and install surface water flow attenuation features across the northern half of Area 1 as well as with



excavation arisings from outside the historic landfills in Area 2. The excavation arisings could include both natural ground and Made Ground and will be coded as waste arising from construction activities (Chapter 17 of the EWC).

The table sets out the anticipated waste EWC codes.

Table 2: Proposed waste types

EWC code	EWC description	Limitations
17 05 04	Soil and stones other than those mentioned in 17 05 03	Limited to site-derived waste meeting the chemical and physical specifications for the works.
17 09 04	Mixed construction and demolition waste other than those mentioned in 17 09 01, 17 09 02 and 17 09 03	Limited to site-derived waste meeting the chemical and physical specifications for the works.
19 12 09	19 12 09 minerals (for example sand, stones)	Limited to site-derived waste meeting the chemical and physical specifications for the works.
19 12 12	19 12 12 other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11	Limited to site-derived waste meeting the chemical and physical specifications for the works.

### 3.3 Meeting Quality Standards

The client will ensure that its appointed contractors and consultants are appropriately qualified for the works any work undertaken, and that any designs or construction will be fit for purpose.

Of relevance to this WRP, VolkerFitzpatrick Limited (VFL) has advised on earthworks design including the cut / fill, Waterman has advised on contaminated land, landscape bund design and waste matters. Details of VFL's and Waterman's management systems and accreditations are included in Appendix D. VFL will be the earthworks design and build contractor.

The planning application for the Radlett SFRI scheme was accompanied by an Environmental Statement (ES). The ES reported the findings of a comprehensive Environmental Impact Assessment which addressed matters including, flood risk, ground conditions, risk to controlled waters and so on. The ES and associated technical assessments set out mitigation measures to be protective of the environment during the construction and operation of the Development.

Therefore, the finished scheme will not result in any unacceptable environmental impacts.

### 3.4 Chemical and Physical Specification – Suitable for Use

#### 3.4.1 Chemical Specification

The chemical specification for the waste is driven by contaminated land for planning controls (the outcomes of which are summarised in section 2.2.5 above) and the requirement for the waste to be non-hazardous (to enabling permitting as a waste operation rather than an installation).

The historically landfilled waste has been subject to assessment in accordance with relevant guidance on contaminated land assessment for planning. No numerical criteria have been proposed for the waste. It has been found to be acceptable to remain in place at depth and beneath cover layers / hardstanding. On the basis of its contaminant profile, the waste has also been found to be acceptable to be used as earthworks material (fill) – subject to it being placed beneath a cover layer such as subsoil and topsoil and the following limitations.

The waste shall be:

- free of visual/olfactory evidence of contamination (oil staining or odours, discolouration of soil, free product);

- free of visually identifiable ACM (asbestos containing materials) such as chrysotile cement sheets; and
- free of visually identifiable vegetation.

Notwithstanding the above, the waste the subject of this waste recovery plan will be classified as non-hazardous waste. The waste acceptance procedures will accompany the application for waste recovery EP and will set out how the waste will be sampled, tested and assessed to ensure only non-hazardous waste is used.

Waterman is suitably qualified to prepare this specification.

### 3.4.2 Physical Specification

A physical (earthworks) specification for the waste has been prepared and is presented as a separate file. Earthworks Specification, Radlett SRFI Area 2 – Landscape bunds. Waterman, August 2023 (RAD-WAT-A2EX-XX-SP-C-0023). To meet the earthworks specification, the landfill waste will require treatment (sorting and mechanical screening). The treatment will be regulated by separate mobile treatment EP.

Waterman is suitably qualified to prepare this specification.

## 3.5 Waste Recovery Test

The waste recovery test is met by reference to there being (specific) “obligations to complete the scheme”.

The planning context for the scheme is set out in section 2.1.3 above and Appendix B with the various documents referred to supplied separately for reference. The planning permission has been properly implemented and the master developer is now obliged to complete the development in accordance with conditions attached to the outline planning permission by the planning inspector and to the RMA approvals by the LPA. The analysis prepared by RPS demonstrates that:

- there are existing planning conditions which require the provision of the landscape bunds (earth mounds);
- the planning conditions were imposed following extensive consideration of all aspects of the development including the need for the mitigation of visual and noise impacts provided by the landscape bunds;
- that requirement was imposed following consideration by the Secretary of State on appeal (twice) and further consideration by the local planning authority at reserved matters stage; and
- given the above, there is no likelihood of the requirement to provide the landscape bunds being altered.

As a result, in order that the development can proceed, the landscape bunds will need to be constructed as required and, in the absence of waste being available, other material would need to be used.

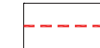
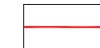
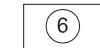
## **APPENDICES**

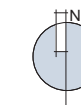
## **A. Plans and Drawings**

- Different Development Phases (Area 1 to 8) of the SFRI (RAD-WAT-A2EX-XX-PL-I-0001);
- Site Location Plan (RAD-WAT-A2EX-XXDP-I-0002);
- Area 2 Bunds Waste Recovery Area Boundary (RAD-WAT-A2EX-XX-DR-C-0027.P02); and
- Area 2 Bunds Long Section (RAD-WAT-A2EX-XX-DS-C-0003).





-  Strategic Rail Freight Interchange Site Boundary
-  Country Park Boundary
-  Land Parcel



Project Details	WIE18710-100: Radlett
Figure Title	A3 - Different Development Phases (Area 1 to 8) of the SRFI
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Date	December 2022
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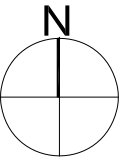




This drawing should not be scaled. Dimensions to be verified on site. Any discrepancies should be referred to the Engineer prior to work being put in hand.

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**GENERAL NOTES**



P01	SO	16.12.22	PRELIMINARY ISSUE	DC	FA
Status	Date	Description		By	Chk

Amendments

Project **RADLETT**

Title **A1  
SITE LOCATION PLAN**

Client -



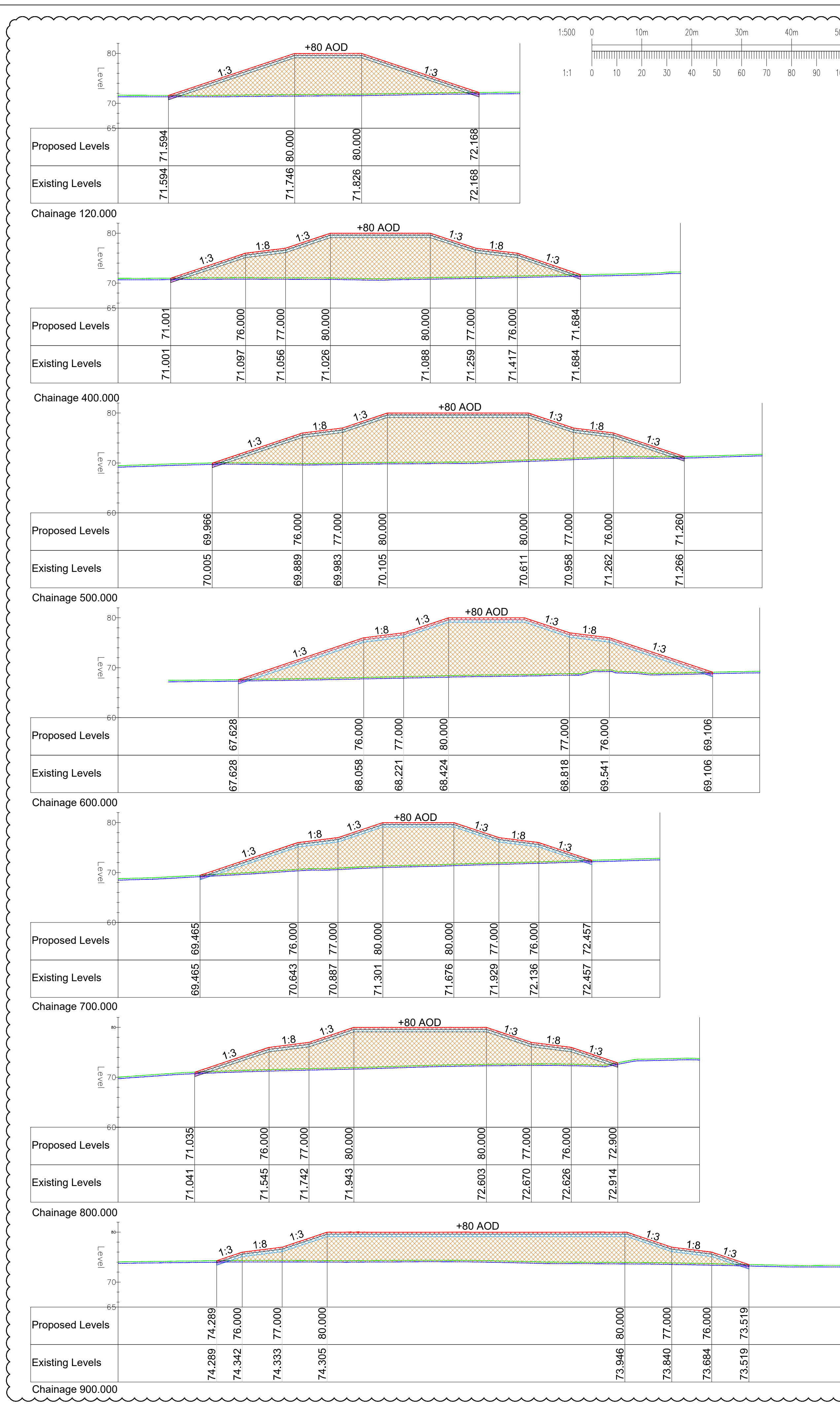
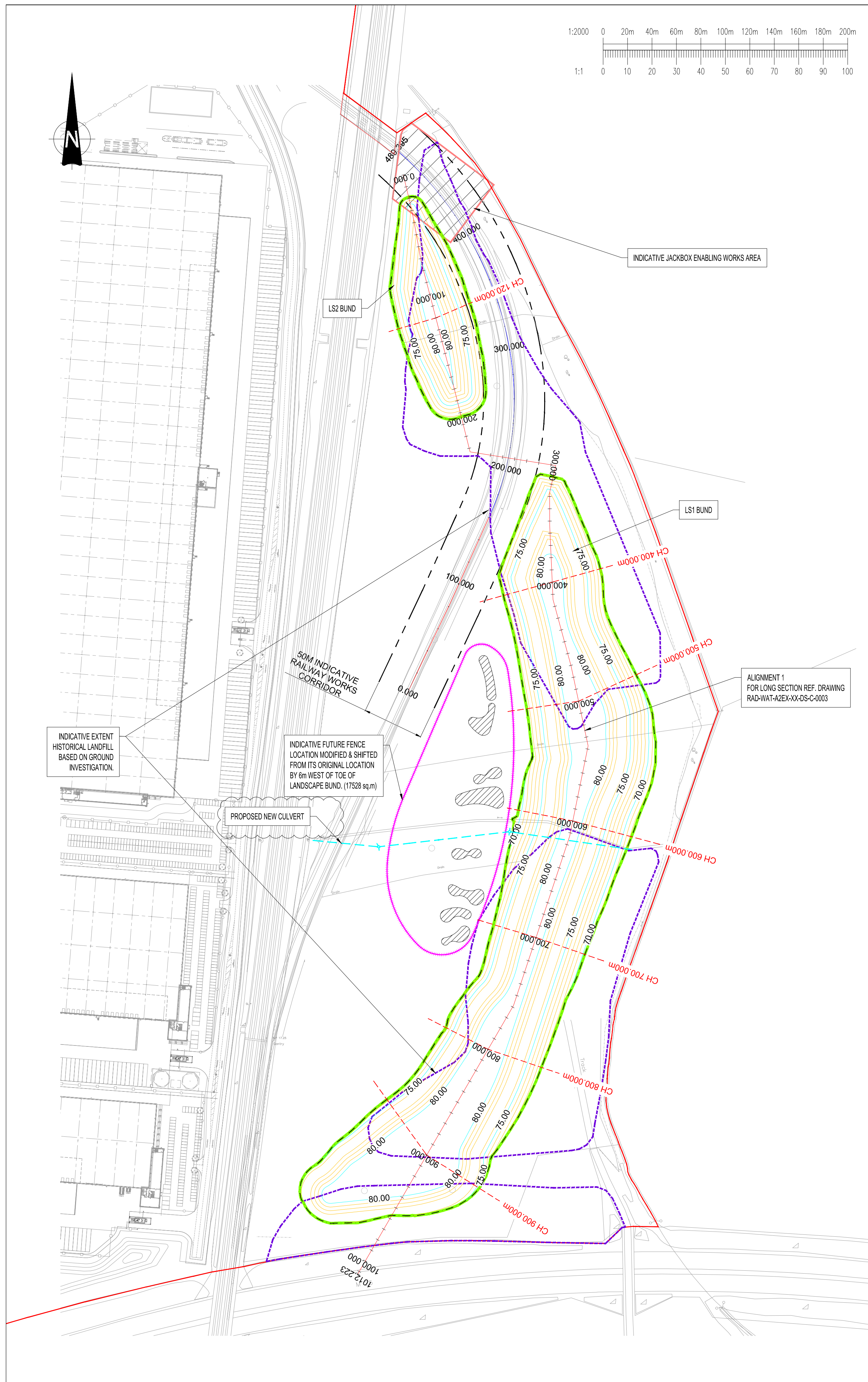
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Status <b>PRELIMINARY</b>			
Designed By	BG	Director	FA
Waterman Ref	WIE18710-100		
Drawn By	DC	Date	DECEMBER 2022
Scales @ A2	NTS		

Project - Originator - Volume - Level - Type - Role - Number	Revision
<b>RAD-WAT-A2EX-XX-DP-I-0002</b>	<b>P01</b>

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**Key:**

- Proposed finished bunds level. 1m intervals.
- Proposed Bund Level.
- Existing ground Surface
- Existing Topsoil Base Surface assuming 300mm existing Topsoil depth.
- Extent of historical landfill based on ground investigation.
- Waste Recovery Area Boundary.
- 400mm depth Topsoil.
- 500mm depth Subsoil.
- Remaining material from Subsoil formation surface to the Existing Top Soil base Surface assuming 300mm depth of existing Top Soil to be removed.
- Cut required to achieve the proposed Topsoil and Subsoil depths.

- Notes:**
- Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
  - This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
  - All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
  - Any discrepancies noted on site are to be reported to the engineer immediately.

Rev	Date	Description	By	Chk	App
P04	22.08.23	TOP SOIL & SUB SOIL DEPTHS UPDATED. NEW CULVERT ADDED AND CROSS SECTIONS UPDATED TO INCLUDE EXISTING TOPSOIL REMOVAL.	ZT	SO	FA
P03	21.06.23	PONDS FENCE UPDATED	ZT	SO	FA
P02	13.06.23	DRAWING TITLE UPDATED & LST WASTE RECOVERY BOUNDARY ADDED.	ZT	SO	FA
P01	22.05.23	ISSUED FOR INFORMATION	ZT	SO	FA

Project: **RADLETT SRFI**

Title: **AREA 2 BUNDS WASTE RECOVERY AREA BOUNDARY**

Client: **SEGRO UK**



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FOR MAIN CONTRACTOR APPROVAL **S4**

Designed By: ZT	Checked By: SO	Approved By: FA	Waterman Ref: WIE18710
Drawn By: ZT	Date: 22/08/23	Scales @ A1: 1:2000 & 1:500	

Project - Originator - Volume - Level - Type - Role - Number Revision

**RAD-WAT-A2EX-XX-DR-C-0027 P04**

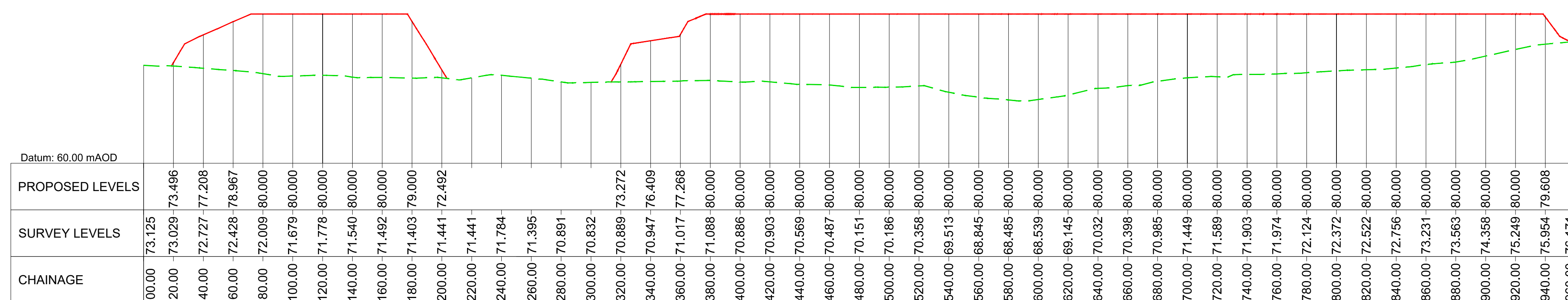


**Key:**

- Proposed Bunds Level.
- - - Existing Ground Surface.

**Notes:**

1. Do not scale this drawing. All dimensions must be checked/ verified on site. If in doubt ask.
2. This drawing is to be read in conjunction with all relevant architects, engineers and specialists drawings and specifications.
3. All dimensions in millimetres unless noted otherwise. All levels in metres unless noted otherwise.
4. Any discrepancies noted on site are to be reported to the engineer immediately.



ALIGNMENT 1 LONGITUDINAL SECTION  
SCALE: H 1:2000, V 1:400. DATUM: 60.000

Rev	Date	Description	By
P01	23.03.23	DRAFT	ZT

Amendments

Project  
**RADLETT**

Title  
**AREA 2 BUNDS  
LONG SECTION**

Client  
**SEGRO UK**

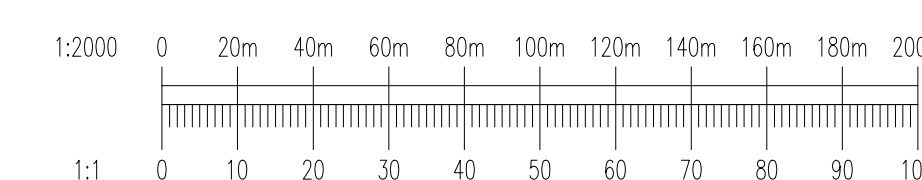


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Sustainability  
**WORK IN PROGRESS** S0

Designed By	ZT	Checked By	FA	Waterman Ref	WIE18710
Drawn By	ZT	Date	23/03/23	Scale	H 1:2000 & V 1:400

Project - Originator - Volume - Level - Type - Role - Number	Revision
RAD-WAT-A2EX-XX-DS-C-0003	P01





## **B. Planning History and Analysis**

- Radlett SRFI – Landscape Bunds Briefing Note. RPS, August 2023

The following supporting documents referred to in the RPS note are supplied separately.

- Appeal Decision (2014)
- Appeal Decision (2008)
- Environmental Statement
  - Part 2 Project Information
  - Chapter 4 Landscape & Visual
  - Chapter 7 Noise
- Environmental Statement Technical Appendices
  - Figure 4.19 Section Location Plan
  - Figure 4.20 Landscape Sections
  - Figure 4.21 Landscape Sections
  - Figure 4.31 Potential Visual Effects Table
  - Figure 4.32 Visual Effects During Construction
  - Figure 4.33 Visual Effects Year 1
  - Figure 4.34 Visual Effects Year 15
  - Appendix 7.A2 Location Plan
  - Appendix 7.A7 Tables of Calculated Noise Levels Analysis
  - Appendix 7.A8 Noise Contours
  - Appendix 7.A10 Construction Noise Calculation Sheets
- Area 1 and 2 OPA and RM Comparison Plans – Bunds (ref. 063533-Sk-001)
- Noise Condition 25 Assessment Report
- Reserved Matters Landscaping Officers Report (ref. 5/2017/1995/LSA)
- Country Park Proposed Topography (ref. 394503-LV-074)

# RADLETT SRFI – LANDSCAPE BUNDS BRIEFING NOTE

23 August 2023

## Introduction

- 1.1 This note has been prepared to set out the history of, and requirement for, the creation of landscape bunds or 'earth mounds' as necessary mitigation for the Radlett SRFI scheme.
- 1.2 The note supplements the Waste Recovery Plan (June 2023) prepared by Waterman which details the Area 2 proposed bunds which are to be constructed from waste.
- 1.3 The planning application documents for the site have been reviewed to confirm the planning justification and design specifications for the landscape bunds which are to be located in Area 1 & Area 2. Specifically, the required profile, volume and AOD height of the bunds has been identified.
- 1.4 It is clear from the long history of the consideration of this development that the bunds in Areas 2 formed part of the consideration of the planning merits and are required for screening and noise mitigation purposes. This mitigation is required during the construction, and operational stages as detailed in the Environmental Statement (ES). The requirements to deliver the bunds are included within the planning conditions attached to the permission. The extracts from these sources are detailed below. The full documents are appended to the note.
  - Appeal Decision (2014)
  - Appeal Decision (2008)
  - Environmental Statement
    - Part 2 Project Information
    - Chapter 4 Landscape & Visual
    - Chapter 7 Noise
  - Environmental Statement Technical Appendices
    - Figure 4.19 Section Location Plan
    - Figure 4.20 Landscape Sections
    - Figure 4.21 Landscape Sections
    - Figure 4.31 Potential Visual Effects Table
    - Figure 4.32 Visual Effects During Construction
    - Figure 4.33 Visual Effects Year 1
    - Figure 4.34 Visual Effects Year 15
    - Appendix 7.A2 Location Plan
    - Appendix 7.A7 Tables of Calculated Noise Levels Analysis
    - Appendix 7.A8 Noise Contours
    - Appendix 7.A10 Construction Noise Calculation Sheets
  - Area 1 and 2 OPA and RM Comparison Plans – Bunds (ref. 063533-Sk-001)
  - Noise Condition 25 Assessment Report

- Reserved Matters Landscaping Officers Report (ref. 5/2017/1995/LSA)
  - Country Park Proposed Topography (ref. 394503-LV-074)
- 1.5 A planning application (ref. 5/06/1680) for the SRFI was refused by St Albans District Council (SADC) on 20 February 2007. The applicant appealed against the refusal (ref. APP/B1930/A/07/2045747) and a public inquiry was held between 6 November 2007 and 20 December 2007. The Secretary of State issued their decision on 04 June 2008 to dismiss the appeal, based on the narrow issue of the robustness of the alternative sites assessment. A later planning application (ref. 5/09/0708) for the SRFI was refused by SADC on 21 July 2009. This decision was also appealed (ref. APP/B1930/A/09/2109433) and a public inquiry was held between 24 November and 18 December 2009. The Secretary of State issued their decision on 14 July 2014 to allow the appeal and planning permission was granted. It is the outline planning permission granted by the Secretary of State in 2014 that is being implemented.
- 1.6 Therefore, the SRFI development has been subject to detailed scrutiny, including the necessary mitigation, not only by the Council but also at appeal.

## Appeal Decision

- 1.7 The Appeal Decision for the site (application ref. 5/09/0708 and appeal ref. APP/B1930/A/09/2109433) dated 14 July 2014 details the conditions attached to the planning permission in Annex B.
- 1.8 Condition 3 relating to the Key Parameters Plan states: *“The development shall be carried out in accordance with the Key Parameters Plan and the specified paragraphs of the Development Specification Document dated March 2009 and drawing number 394503-LV-074 referred to in condition 3(f) comprising: ... (f) the height of earth mounds shown on drawing number 394503-LV-074 together with para 4.8”*. Drawing number 394503-LV-074 has been appended to this note and identifies the required scale and height of the bunds for Area 2.
- 1.9 Condition 3 reason states: *“This condition is necessary to ensure that the development does not materially depart from that applied for and considered in the ES”*.
- 1.10 Condition 15.1 states: *“The details to be submitted for approval under condition 2 in relation to landscaping for Areas 1 and 2 shall include: ... (b) proposed ground modelling, re-profiling and mounding with proposed contours to be at a maximum of 1 metre levels”*.
- 1.11 Condition 15 reason states: *“This condition is necessary to guide the submission of landscaping details required as part of the reserved matters application and to ensure that the landscaping in Areas 1 and 2 is carried out and appropriately maintained”*.

## Environmental Statement Part 2 Project Information

- 1.12 The Environmental Statement Part 2 Project Information details the description of the site and the surroundings and the proposals in part 4. This includes details of the key parameters and development specifications.
- 1.13 Paragraph 4.22, when identifying aspects of “Environmental Performance” of the proposed development states:  
*“The Development Site will be enclosed by landscaped earth mounds.”*
- 1.14 Paragraph 4.30 (page 20) of part 4 the Earth Mound Height Section specifies the maximum height of the earth mounds in Area 2: *“The maximum height of the earth mounds would range from **79 to 93 metres AOD**, as shown on the Key Parameters Plan.”* This maximum height is also set out in the Development Specification at paragraph 4.8 however the actual planning condition was more specific as to heights in different areas requiring them to be in accordance with drawing number 394503-LV-074.
- 1.15 Paragraph 4.39 (page 22) of part 4 also details the need for earth mounds in the construction phase for noise mitigation: *“The early construction of the earth mounds, designed to mitigate noise from site operations, would **control noise emissions from the majority of the subsequent construction operation.**”*

- 1.16 Therefore, the Project Information (Part 2) of the Environmental Statement specifies the AOD height of the earth mounds and their need for controlling noise during the construction phase.

## Environmental Statement Part 3 Reports and Analysis

### Chapter 4 Landscape and Visual Impact Assessment

- 1.17 Chapter 4 Landscape and Visual Impact Assessment (LVIA) includes details on the earth mounds in Area 2 and assesses their impacts.
- 1.18 Paragraph 4.29 states that a series of visual effects maps had been produced to *“illustrate the potential visual effects on different receptors, during construction, at Year One and at Year 15. These are shown on Figures 4.31 to 4.34.”* Figures 4.31-34 are appended to this note for reference. To the east of the site where the Area 2 bunds are situated, the figures show visual receptors (notably Napsbury Hospital, referenced as ‘N’ in the figures as residential development) and potential visual effects. Napsbury Hospital in Figure 4.31 is identified as having a ‘High’ receptor sensitivity.
- 1.19 Paragraph 4.35 stresses that the earth mounds, as part of the landscape strategies mitigation, are essential for screening from residential developments nearby to the east, *“mitigation measures are integral to the design and the impacts identified herein are therefore residual impacts.”*
- 1.20 The section on Area 2 landscape impacts in paragraph 4.167 (page 43) discusses the assessment of the effects of the proposals on Area 2 based on different overall aspects, including that *“Earth modelling is proposed on the eastern boundary for visual screening.”* It also states that *“The proposals would provide a strong framework of new woodland to the eastern and southern edges.”* This references that *“Scrub will be encouraged on the slopes of the bunds to create a transition habitat between woodland and grassland areas.”*
- 1.21 The section on Visual Impacts from paragraph 4.173 identifies the potential visual impacts that would be caused by the proposals, visual receptors and their sensitivity. Specifically, Napsbury Hospital, North Cottages and London Colney are identified in Tables 4.10 and 4.11 as residential visual receptors with high and moderate sensitivities. These are situated to the north east of the site which the bunds have been designed to mitigate.
- 1.22 The section on Secondary Mitigation Measures in relation to landscape proposals in Area 2 in paragraph 4.197 (page 58) details how landscape proposals would include earth modelling and the *“landscape buffers would vary in width and be mounded to provide screening to the development.”* The planning permission issued by the Secretary of State in 2014 following consideration of the application went further and prescribed the heights of the mounds.
- 1.23 In the conclusions section, paragraph 4.246 (page 73) the ES recalls the previous Secretary of State’s decision letter which concluded that *“the impact on the landscape of the proposal would be mitigated to some degree by the mounding and planting proposed (Paragraph 20).”*
- 1.24 Paragraph 4.248 states: *“There are limited visual receptors associated with the SRFI as a result of the screening effects of existing buildings, vegetation and topography. Where there are visual receptors, proposed earth modelling and planting would filter and screen the proposed built forms from the majority of visual receptors in the long-term. In Paragraph 16.16 of the Inspectors Report of the 2007 Inquiry the Inspector comments that “the bunds would be very large and of a wholly different scale to the existing bunds...about the site.... they would appear artificial and intrusive in their own right. Notwithstanding this, it seems to me that their scale would be commensurate with that of the proposed warehouses which they are intended to screen and I see no reason to criticise them per se”.* The paragraph goes on to state that the Council agreed with the requirement for the bunds. Figure 4.19 in the appendices shows the Section Location Plan (ref. 394503-LV-019) which shows the role of the Area 2 bunds for screening, notably Sections A and G. Section A-A is illustrated in Figure 4.20 and 4.21 (Landscape Sections ref. 394503-LV-020 and 394503-LV-021).
- 1.25 This section identifies the screening and filtering purpose of the bunds in the long-term as part of the consideration of the mitigation for the visual impact of the development.

## Chapter 7 Noise

- 1.26 Chapter 7 of the Environmental Statement considers the assessment of impact and mitigation measures associated with noise. Appendix 7.A2 Location Plan is appended to the Noise chapter which identifies noise sensitive receptors near Area 2 earth mounds. Specifically, Appendix 7.A2 illustrates North Cottages, Lovett Road and the Former Napsbury Hospital as the nearest noise-sensitive premises to the site, as referenced in paragraph 7.1.8 of the Noise chapter.
- 1.27 The section on the assessment of impact during the construction stage in paragraph 7.5.5 part (ii) sets out the role of bunds generally around the perimeter of the site for noise screening to protect residences: *“The main earthworks would commence as soon as the site clearance works have finished. These works would include the formation of **visual/noise bunds around the perimeter of the site**; work which would be undertaken early in the construction programme so as to afford **beneficial screening of noise from subsequent construction activities.**”*
- 1.28 Part (v) of this paragraph further acknowledges that *“The latter stages of the construction programme would involve the construction of the main warehouse units across the site. These activities are generally quieter operations than those associated with earthworks and **will benefit from the acoustic screening provided by earth bunding around the site perimeter.**”*
- 1.29 The section on the operation stage in paragraph 7.6.9 details how the earth bunding will provide noise reduction: *“The main mitigation measures proposed are extensive earth bunding around the perimeter of the site. These measures will **provide at least 15 dB reduction of noise from site operations.**”*
- 1.30 The section on the construction stage in paragraph 7.7.1 recognises how earth bunds will control noise: *“The early construction of perimeter earth bunds, designed to mitigate noise from site operations, would **control noise emissions from the majority of the subsequent construction operation within the site to levels well within the suggested limit of LAeq,day = 70 dB for workings lasting more than 40 days in any six month period.**”*
- 1.31 This section of the ES demonstrates the requirement of the bunds for screening of noise during construction activities and the operation stage to ensure noise levels are kept within the suggested limits.

## Area 1 and 2 OPA and RM Comparison Plans – Bunds

- 1.32 The Area 1 and 2 OPA and RM Comparison Plans – Bunds (ref. 063533-Sk-001) is appended to this note. This illustrates a comparison of plans at the outline planning application and reserved matters for the noise bunds including those in Area 2.
- 1.33 In respect of Area 2 the plan notes that *“The bund has moved towards the eastern edge of Area 2 to allow for the rail chord to be realigned by approximately 30m. The **bund meets the 80m AOD set out by the Parameter Plans.**”* This demonstrates that despite there being some minor changes to the landscape proposals at reserved matters stage there remained a concern to keep the bunds at the height required of them by the outline planning permission.

## Noise Condition 25 Assessment Report

- 1.34 A Noise Assessment was produced to accompany an application to discharge part 1 of Condition 25 of the outline planning permission for the SRFI.
- 1.35 Section 3 sets out the noise modelling parameters for the report. Paragraph 3.1 lists alterations and confirmations to the noise models that have been made to reflect the detailed scheme including *“the earth mounds are between **79 and 92 metres AOD**”*.
- 1.36 Section 4 Mitigation Measures (the Scheme of Noise Control) details the earth mound mitigation measures.
- 1.37 In respect of the function of the Area 2 northern bund, Paragraph 4.1 details the earth mounds at the *“North-east corner and to the east of the Intermodal Terminal (Napsbury) at +92m AOD at the northern end reducing to +86m at the southern end. A valley in between the two sections reduces to +85m AOD to allow for the positioning of the roundabout to the east of the Intermodal Terminal.*



*South-east corner, to the east of the rail line continuing to the M25 to the south and the rail chord underpass to the north +80m AOD.”*

- 1.38 Paragraph 4.2 identifies areas where an improvement in acoustic screening was necessary and therefore additional acoustic fencing was proposed. This included a *“2-metre acoustic fence on top of the southern section of the north eastern bund (Napsbury) at +88m AOD, continuing in a northerly direction at that height to fill in the valley between the two sections of the bund (maximum 3 metres above the valley – this section of bund includes a retaining structure), joining the northern section of bund which then rises to +92m AOD.”*
- 1.39 The bund and additional screen provide noise mitigation to the north-eastern residential properties.

## **Reserved Matters Landscaping Officers Report**

- 1.40 The Reserved Matters Application (RMA) for Landscaping (LPA ref. 5/2017/1995) Officers Report has been appended to this note.
- 1.41 In paragraph 11.4 it notes that there have been *“localised changes in Areas 1 and 2 relating to the earth mound heights... however, the earth mound heights still conform with the Development Specification Documents”*.
- 1.42 Paragraph 11.9.3 lists the key amendments to the structural landscaping. For the Area 2 Country Park, it states *“Bunding to east of rail chord modified to accommodate revised route of rail chord alignment with revised woodland planting; Bunding to west of rail chord modified to accommodate revised route of rail chord alignment with revised woodland planting.”*
- 1.43 Paragraph 11.12.2 further details the earth mounds and bunding in Area 2 of the Country Park. It notes that *“the bunding to the east of the railchord has been shortened to accommodate the revised rail chord alignment and the proposed bunding no longer extends to the eastern boundary of Area 2 in order to accommodate root protection areas (RPAs) of existing high quality trees on the perimeter of the site... However, the **bund height has not changed therefore the same degree of screening function will be provided to distribution centre units from viewpoints to the north east.**”*
- 1.44 Paragraph 11.12.6 concludes *“Although the proposals include a modification to the height, length and detailed position of bunding in certain locations which, predominantly result from amendments to the infrastructure and development proposals, it is considered that the **proposed earth mounds and bunding would still serve to screen the development to the same extent as approved.** Furthermore, the proposed earth mounds and bunding would remain within the topographical parameters established by the outline planning permission. It is therefore considered that the proposed revisions to the earth mounds and bunding would be within the scope of the outline planning permission.”*
- 1.45 In relation to Area 2, paragraph 12.21.13 states that *“The modifications to bunding and planting along the M25 corridor and Area 2 would have the **same visual effect to these receptors as the 2009 proposals** and would therefore continue to have a low adverse impact.”* Furthermore, paragraph 12.21.17 explains that *“Although there would be modified planting and bunding in Area 2 and along the M25 corridor there would be no change to the magnitude or change or significance of effects from construction phase through to year 15 as the proposed bunding and planting would be visually as effective as the 2009 approved scheme.”*
- 1.46 Paragraph 12.21.23 details the residential properties in London Colney (Shenley Lane). It notes that the 2009 LVIA acknowledges that *“from the two storey properties on Shenley Lane, south of Napsbury Hospital site that there would be direct views of Areas 1 and 2... **The amendments to the bunding and planting would still retain the same level of visual screening as the 2009 outline scheme** and therefore no changes would arise to this visual receptor.”*
- 1.47 Paragraph 12.31 confirms that *“the level of structural planting and bunding surrounding the development site (Areas 1 and 2) would provide the same levels of **visual screening, noise mitigation and ecological benefits** as previously envisaged by the outline planning permission.”*
- 1.48 In the assessment, the report noted: *“Turning to Area 2 of the Country Park, the bunding to the east of the railchord has been shortened to accommodate the revised rail chord alignment and the proposed bunding no longer extends to the eastern boundary of Area 2 in order to accommodate root protection areas (RPAs) of existing high quality trees on the perimeter of the site. Grassland is*

*proposed within the intervening area between the site's perimeter and the bund. To the west of the rail chord the bunding has been lengthened to accommodate its revised route. **However, the bund height has not changed therefore the same degree of screening function will be provided to distribution centre units from viewpoints to the north east***".

- 1.49 Paragraph 13.1238 notes that "Network Rail has confirmed that the necessary operational works required to the MML to facilitate the new rail chord will be carried out in line with the Governance for Railway Investment Projects (GRIP) and they have no objections to the proposals. **Although the alignment of the rail chord has altered since the grant of outline permission, it would still be screened through woodland planting along the eastern edge of Area 2. As such, it is considered that the proposed rail chord would not give rise to noise and disturbance that would be harmful to nearby neighbouring occupiers, or have an adverse visual impact.** There would also be no adverse impacts on ecology within the site. It is therefore considered that the rail chord is acceptable in planning terms".

## Conclusion

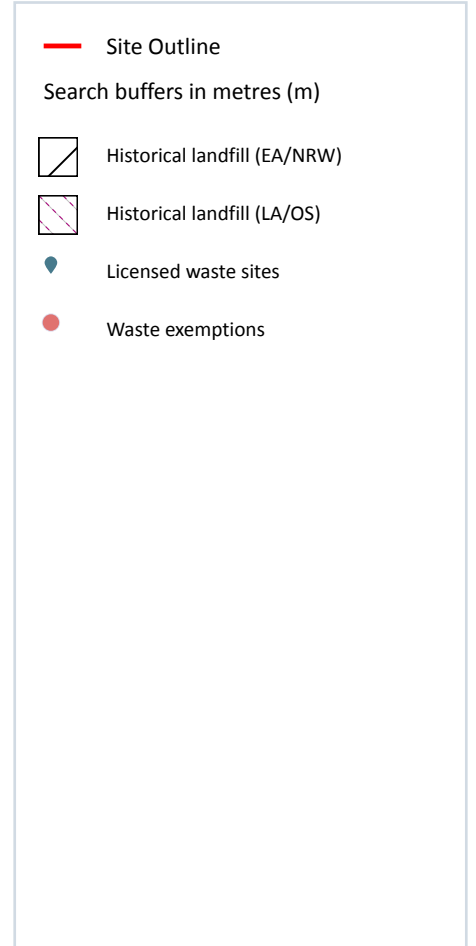
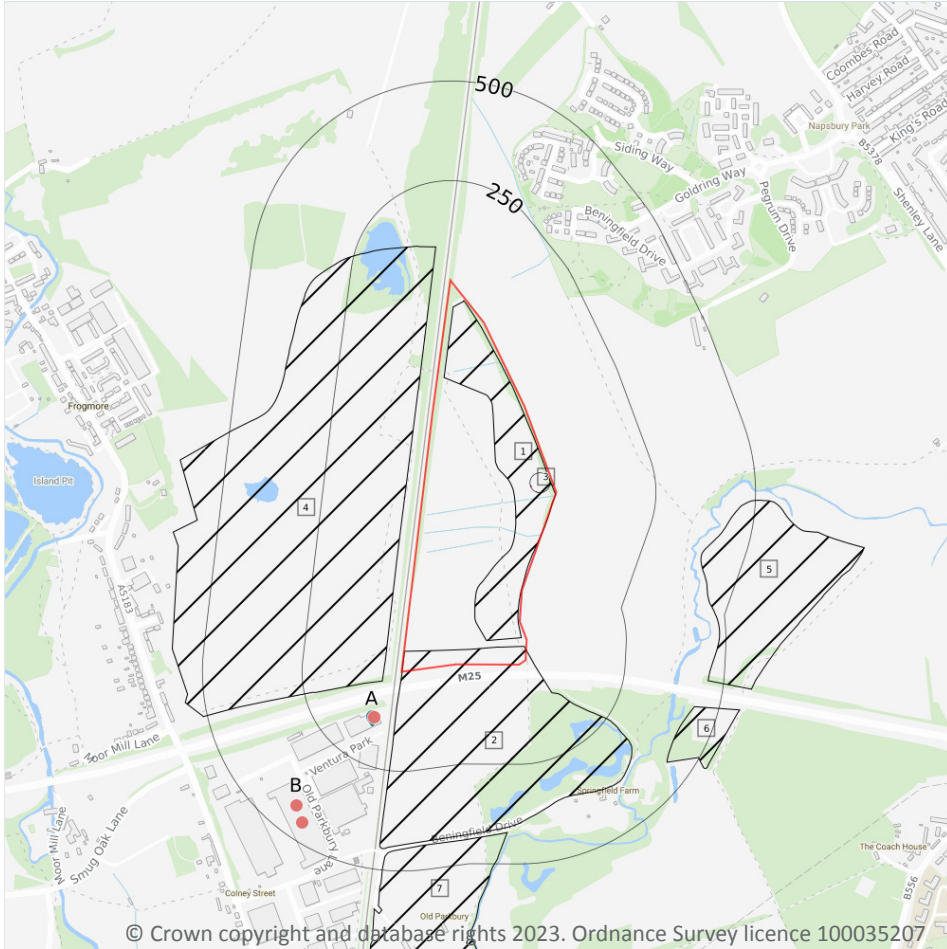
- 1.50 The above extracts demonstrate the rationale and requirement for delivery of landscape bunds at the Radlett SRFI scheme. Mitigation will be provided to reduce and manage noise and visual impacts of the development in construction and operational stages. The requirement to deliver the bunds in accordance with the details submitted are secured by the planning conditions attached to the consent.
- 1.51 Based on the above, it is reasonable to conclude that the Local Planning Authority will expect the delivery of the landscape bunds in accordance with the approved details to ensure noise and visual impacts of the development are appropriately mitigated. Any changes which reduce the performance of the bunds in mitigation of the development effects and increase potential harm towards neighbouring occupiers and the landscape setting would be resisted and unlikely to be acceptable in planning terms. This is evident from the approach of the Local Planning Authority when dealing with reserved matters approval where it was prepared to accept changes but concerned to ensure that the general mass and height of the mounds was not reduced. The bunds therefore are an integral part of the planning consent and the landscape scheme and are required to be delivered as approved.

### **C. Groundsure Report (Extract)**

- Page 22 of Enviro Insight report (reference WTM1-X49-YT5-B4I-KZS).



## 3 Waste and landfill



### 3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

*This data is sourced from the Environment Agency and Natural Resources Wales.*

### 3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

*This data is sourced from the British Geological Survey.*



#### **D. Meeting Quality Standards**

- VFL; and
- Waterman.

### **VolkerFitzpatrick – Meeting Quality Standards**

VolkerFitzpatrick (VFL) is a multi-disciplinary contractor with a reputation for innovative engineering in the civil engineering, building, rail, waste and energy infrastructure sectors. VFL's customer focused culture empowers their experienced employees to find project solutions which exceed the expectations of all stakeholders.

Founded in 1921, VFL has built a reputation for its partnering and collaborative approach to both public and private projects, which in turn has helped the company grow through repeat business. As part of the wider VolkerWessels group, VFL share best practice and skills, harness talent, improve delivery to clients and support the continued growth of the business in the UK.

VFL operate under a fully established BS EN ISO 19001 compliant Quality Management System (QMS) which provides clear guidelines on how quality is managed throughout VFL projects. VFL will apply their Quality Management System, using tried and tested processes in all aspects of project delivery from design to construction. In addition, VFL operate Environmental Management Systems accredited to ISO 14001 and an Occupational Health and Safety Management System accredited to ISO 45001:2018.

With regards to Radlett Strategic Rail Freight Interchange (SRFI), VFL would utilise the QMS including Inspection Test Plans (ITPs), Work Inspection Sheets (WIS) and quality audits by in house Quality Managers, to ensure compliance with all aspects of the project through out the design and construction phases including Remediation Strategies and Deposit for Recovery Permits. This will ensure that the scheme is delivered fit for purpose. The VFL team involved within the project are experienced professionals with experience in similar schemes and includes VFL's in house COTC holder.

# Quality Policy and Practice

January 2023

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## QUALITY POLICY STATEMENT

VolkerFitzpatrick is a multi-disciplinary construction-sector contractor operating across the United Kingdom. We operate under a fully established BS EN ISO 9001 compliant Quality Management System (QMS) which provides clear guidelines on how we manage quality throughout VolkerFitzpatrick.

Our business approach embodies the recognised principles of quality and the core philosophies of quality planning, assurance and control. We will:

- Always seek to fully understand the expectations of our customers and work together to experience excellence. Ensure we are able to consistently deliver products and services that fully meet the requirements of our contracted terms, and applicable statutory and regulatory requirements.
- Openly display leadership in the maintenance of a clear vision of our business core values, vision and principles towards what we do. To support and engage with our employees, and all those under our management to ensure safe, efficient and accurate delivery of our projects.
- Provide our employees with the appropriate training and support needed to develop their skills, knowledge and experience. Allocate individual responsibilities and accountability to employees for delivery performance, and actively encourage each employee to realise their potential.
- Ensure our resources and management methods include the appropriate evaluation of risks, consequences and potential impacts and value to our delivery of service. Our decision making will be based on factual analysis of accurate performance data, balanced with business experience.
- Seek continual improvement of our QMS, of our processes and our delivery. We will apply learning, encouraging innovation and seek better solutions wherever appropriate. Learning and improvement will include consultation with and review of feedback from, employees, the workforce, and relevant interested parties.
- Maintain strong relationships with customers, supply chain and stakeholders, and work collaboratively to continually improve the quality of our delivery and the sustainability of our business.

VolkerFitzpatrick's paving materials testing laboratories are governed by the QMS which meets the requirements of ISO 17025:2017. For the design, manufacture and supply of ready mixed concrete, the QMS meets the requirements of BS EN 206:2013+A1:2016 and BS 8500:2015 + A2:2019 and client

All employees and others working for VolkerFitzpatrick are required to comply with this policy, in particular, to ensure we deliver levels of quality that are in agreement with our own and our customer's expectations. It is the responsibility of VolkerFitzpatrick management and supervisory staff to ensure that this policy and its arrangements are implemented and upheld.

This policy will be reviewed annually and revised as often as may be deemed appropriate by VolkerFitzpatrick, and then brought to the attention of all employees. It is accessible to interested parties via the VolkerFitzpatrick website, Workspace, noticeboards and reception areas, or is available on request.

James Hindes  
Managing Director

Stuart Deverill  
VolkerFitzpatrick Director  
(Representative for Quality)

January 2023

January 2023

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**Quality Policy and Practice**

Issue 19, January 2023

**INTRODUCTION****About VolkerFitzpatrick**

VolkerFitzpatrick is a multi-disciplinary contractor with a reputation for innovative engineering in the civil engineering, building, rail, waste and energy infrastructure sectors. Our customer focussed culture empowers our experienced employees to find project solutions which exceed the expectations of all stakeholders.

Founded in 1921, the company has built a reputation for its partnering and collaborative approach to both public and private projects, which in turn has helped grow the company through repeat business. As part of VolkerWessels, we share best practice and skills, harness talent, improve delivery to clients and support the continued growth of the business in the UK.

VolkerFitzpatrick's registered office is Hertford Road, Hoddesdon, Hertfordshire, EN11 9BX.

**Operational Context**

The way in which VolkerFitzpatrick identifies and subsequently manages external and internal issues that are relevant to its purpose and its strategic direction is described within operational procedure Q19 *Determining the Context of our Organisation*.

**The VolkerFitzpatrick Quality Management System**

Our Quality Management System (QMS) a structured framework used by the business to establish policy and objectives and to describe processes used to achieve those objectives. The Quality Management System directs and controls an organisation with regard to quality.

To lead and operate an organisation successfully, it is necessary to direct and control it in a systematic and transparent manner. Success can result from implementing and maintaining a management system that is designed to continually improve performance while addressing the needs of all interested parties. Our QMS is purposely designed to do this.

The QMS and its utilisation on projects, is monitored by regular surveillance by the certification body. VolkerFitzpatrick are registered to BS EN ISO 9001:2015. The British Standards Institute (BSI) is the registration body we use to confirm our QMS meets the requirements. They are accredited by the United Kingdom Accreditation Service (UKAS).

The VolkerFitzpatrick Quality Management System is made up of the following:

- A Quality Policy Statement (within this document)
- The Quality Policy and Practice (this document), which gives an overview of our approach to 'managing quality'. Every employee receives a copy of this document, and it is also accessible to interested parties via the VolkerFitzpatrick website, Workspace (our Business Management System), reception areas or is available on request
- An organisational structure
- A set of operating 'Processes'
- A set of 'Procedures'

The company's Quality Policy and use of quality management system is applicable to all projects, offices and operational facilities.

The project application of the QMS is described with each project specific Quality Management Plan Plan (QMP), which may be set out within:

- The Quality Management section of the Project (H02-01) Site Management Plan (SMP) or iSMP (intelligent Site Management Plan) or;
- A separate project specific Quality Management Plan - structured to meet specific Employers' Requirements / Works Information requirements, and as such subject to their approval.

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**Quality Policy and Practice**

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**INTRODUCTION (CONTINUED)****Digital Construction**

VolkerFitzpatrick continues to invest in digital technology and innovative solutions, to empower us to manage information, work smarter, create more time for thinking, improve delivery efficiency and ultimately the quality of our service and product.

The business has established a 'Digital Roadmap' to plan and track progress on its digital and innovation journey. Project teams are fully involved with trials and technology roll-outs to ensure learning and best value is achieved. A 'Digital Toolbox' sets out guidance to the business and its projects guidance on available digital technologies - what to use, when to use it, and how to get best value out of it.

Project 'Digital Plans' are developed to set out which digital applications are relevant to a particular project. The plans adopted by each project are to be described within the Project Site Management Plan.

Information related to the Digital Roadmap, Digital Toolbox and Digital Plans are all available via the business intranet In-Site.

**Quality Management Principles**

The VolkerFitzpatrick approach to quality management is founded upon the internationally and industry-wide recognised Quality Management Principles, which are:

- Customer Focus
- Leadership
- Engagement of People
- Process Approach
- Continual Improvement
- Evidence-based Decision Making
- Relationship Management

**The Process Approach and use of Processes**

A process is a set of interrelated or interacting activities which transforms inputs into outputs. BS EN ISO 9001 requires that we must identify the processes that are key to our QMS and how they apply across the company. VolkerFitzpatrick use of process incorporates the Plan-Do-Check-Act (PDCA) cycle and risk-based thinking.



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**INTRODUCTION (CONTINUED)****Procedures**

VolkerFitzpatrick utilises several documented procedures which are agreed by VolkerWessels UK, and subsequently VolkerFitzpatrick, as the accepted way in which key activities are undertaken:

- *H02 Risk Assessment and Method Statements*
- *Q01 Control of Documented Information - Overview*
- *Q02-VF Quality Planning Meeting*
- *Q03 Audit*
- *Q04-VF Non-Conformance and Corrective Action*
- *Q05 Lessons Learnt*
- *Q07 Management Review*
- *Q08 Measure and Test Equipment*
- *Q09 Planning Procedure*
- *Q10 Design Management*
- *Q10-VFB Design Management*
- *DP1 Design Management - General*
- *Q11 Tender Risk Classification & Tracking*
- *Q12 Construction Best Practice Guidance*
- *Q13 Project Planning*
- *Q13-VFB Project Planning*
- *Q14 Site Samples, Mock-ups, Test Panels and Benchmarks*
- *Q17 Principal Designer Role*
- *Q18 Objectives, Targets, Measures and Actions*
- *Q19 Determining the Context of our Organisation*
- *Q24-VF Inspection and Testing*
- *Q25-VF Temporary Works*
- *Q37 Information Management (BIM) Procedure Manual*
- *Q40 Paving Team Quality Management Systems Procedure*

In support of the above there are a number of rail specific management documents that cover compliance, design and engineering to meet the specific requirements of the Rail Sector.

**Note on Accessing Workspace**

The *VolkerFitzpatrick Quality Policy and Practice* is available as a printed document, and electronically via Workspace. The processes and procedures are also available via Workspace.

Policy and Practice documents are also observable via the public accessible VolkerFitzpatrick website.

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## 1. INFORMATION MANAGEMENT

BS EN ISO 9000:2015 defines a 'document' as information and the medium on which it is contained, for example a record, specification, procedure document, drawing, report, or standard. The medium can be paper, magnetic, electronic or optical computer disc, photograph or master sample, or combination thereof.

### 1.1 Control of Documented Information

BS EN ISO 9000:2015 also defines 'documented information' as information required to be controlled and maintained by an organisation and the medium on which it is contained.

Q01 *Control of Documented Information - Overview* describes the business approach towards control. Q01-01 *Control of the Integrated Management System (IMS)* defines how we establish, create, format, reference, control, and make available the IMS documentation. This document also defines how we control the IMS screens and other storage areas within Workspace including the document library and the project folder structure

### 1.2 Control of Records

Q01-02 *Control of Records and Workspace on Projects* defines the controls for retaining documented information, including but not limited to construction information, specifications (including drawings) and records (completed forms, plans or emails). It includes guidance on project-based document storage and access to records through Workspace and permissions determined by folder security and individual employee access rights.

Q01-03 *Control of Records and Workspace in Offices and Departments* defines the controls for retaining documented information, including but not limited to shared services departments and regional business unit offices. It includes guidance on document storage and access to records through Workspace.

Q01-04 *Control of Archiving* defines the controls for archiving project and office records.

Where we are working in collaboration under BS ISO 44001:2017 document control and records control are agreed with our collaborative partner. Any copies of collaborative documentation we hold will fall within the remit of these procedures.

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**2. ORGANISATION AND ARRANGEMENTS****2.1 Leadership**

Leadership and commitment to quality of our services and products and the effectiveness of the quality management system is driven by the VolkerFitzpatrick Board. The Board support the various levels of management in the business to projects in the delivery of the requirements of the quality management system and specific project quality requirements.

Yearly quality improvement plans (QIP) are developed jointly by the quality team and senior managers within VolkerFitzpatrick. These QIPs are endorsed and supported by the Board and performance against the QIPs is regularly monitored and reported to the Board.

**2.2 Responsibility for Quality Management**

Quality Management leadership is provided as an integral part of the VolkerFitzpatrick management structure and its functionality. The roles that fall within VolkerFitzpatrick's senior management group are shown below:

- Managing Director
- Divisional Managing Directors
- Operations Directors
- Commercial Director
- Health & Safety Director
- VolkerWessels UK Corporate Responsibility Director
- Lead Quality Manager
- Divisional Quality Leads

Responsibilities for quality for all Senior Management roles include:

- Demonstrating leadership and engagement within the application of the QMS across the business
- Developing the Quality Policy and business performance objectives and targets for VolkerFitzpatrick, and ensuring that the correct organisational structure and resources are in place to support these goals
- Promoting the policy, strategic direction, objectives and targets to employees to increase awareness, motivation and involvement
- Ensuring a process approach to all management activity, and that risk / opportunity based thinking is applied appropriately to all planning and delivery activities
- Ensuring that the delivery goals and responsibilities for individual employees reflect our overall quality objectives
- Ensuring the business correctly focuses on the needs of our clients / customers, VolkerFitzpatrick and relevant interested parties
- Ensuring the QMS is implemented to meet the relevant needs
- Reviewing the QMS periodically and / or in response to strategic / tactical business needs
- Identifying ways in which to improve the QMS and its application
- Ensuring product and service conformity is measured
- Ensuring quality is prioritised when considering on-time and on-budget delivery
- Ensure that responsible persons take appropriate action if planned results are not, or will not be, achieved throughout the project life cycle, by the organization and its supply chain.

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**2. ORGANISATION AND ARRANGEMENTS (CONTINUED)****2.2 Responsibility for Quality Management (Continued)**

Different roles have varying levels of authority with regard to our QMS. These are explained as follows:

**Managing Director**

The Managing Director (MD) in coordination with the Board Director responsible for quality management is ultimately accountable holding overall responsibility for the operations of VolkerFitzpatrick, The MD is ultimately accountable for the company's QMS and setting realistic goals for the continual improvement of quality management.

**Director Responsible for Quality**

The Managing Director for Building Division (who is also the Board of Directors' representative for quality management) holds responsibility for quality issues, developing long term strategy for the business to overseeing its day-to-day activities.

**Divisional / Operations Directors**

Directors are additionally responsible to the MD for:

- The operation of their divisions, from the initial business development process right through to achieving client satisfaction
- Leading the effective implementation of the policy and QMS through their delivery teams
- Providing leadership and engaging active participation of workers in improving quality management throughout our activities
- Ensuring appropriate training, coaching, mentoring and support is provided to their staff to develop their knowledge, skills and experience with regard to the application of the QMS

**Contracts Management / Site Management**

It is the responsibility of Contract / Site Management to:

- Oversee and support the effective implementation of the QMS and liaise with clients to ensure their satisfaction
- Provide an overall quality plan for each project, and ensure that the QMS is implemented throughout our activities
- Implement the company's procedures for dealing with subcontractors and ensure that proper cooperation and coordination takes place between the various parties who may share the workplace / site
- Ensure employees, self-employed, temporarily employed, trainees and non-employed persons have received adequate training and information about the activity they are required to undertake including the quality
- Ensure that work inspections are carried out, including maintenance of appropriate inspection records. Ensure that quality related incidents and Non-conformances are raised in line with company procedures.
- Attend quality management training arranged by the company

**General Site Foremen / Gangers**

It is the responsibility of Foremen and Gangers to:

- Ensure operatives are suitable, competent, trained and authorised to carry out the work
- Ensure that work inspections are carried out, including maintenance of appropriate inspection records. Ensure that quality related incidents and Non-conformances are raised in line with company procedures
- Cooperate and liaise where appropriate with other contractors' site supervision

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**2. ORGANISATION AND ARRANGEMENTS (CONTINUED)****2.2 Responsibility for Quality Management (Continued)****Health & Safety Director**

It is the responsibility of the Health & Safety Director to:

- Ensure the effective use of the Quality Management Team department and its resources
- Ensure the advisory service provided by the department is an effective and practical interpretation of applicable regulatory and company requirements
- Assist the Director Responsible for Quality in setting realistic goals for the continual improvement in quality management
- Develop the QMS to achieve the goals set
- Ensure that the goal's set are periodically monitored to agreed standards
- Ensure that the company is audited against the standards detailed in the QMS
- Liaise with the divisional Quality Leads

**Quality Management Roles - competence, support, impartially and independence**

For the purposes of clarification under BS EN ISO 9001:2015, quality management is not outsourced. Competent quality management professionals are employed with the necessary skills, knowledge and experience, as detailed within job descriptions and vacancies (when applicable).

Dedicated Quality Managers are directly employed within the operational divisions of VolkerFitzpatrick. Their line management reporting lines are outside those of operational delivery teams, and thus maintain the ability to perform their roles with independence and impartially, and the full support of the organisation. Their competence is reviewed on a regular basis including, but not limited to, Development Performance Reviews (DPRs).

The VW UK CR Director, in reporting to the CEO, retains overall responsibility for the integrated management system (IMS) and oversight of quality management on behalf of the VW UK board.

The VW UK Director retains impartiality in their remit and extends this impartiality to all employees in dedicated quality management roles, to ensure they are facilitating the achievement of quality management requirements. The VW UK CR Director's responsibilities include a duty to support dedicated quality management employees in the achievement of their own responsibilities, and will report any shortfalls to the VW UK board as a minimum.

**Lead Quality Manager**

The VolkerFitzpatrick Lead Quality Manager reports to the Health & Safety Director and is responsible for monitoring business application of the QMS in terms of compliance, and of providing support and advice on all quality management matters to operating divisions, and their staff.

**Divisional Quality Leads**

Divisional Quality Leads report to the Director Responsible for Quality. Additionally they are responsible for responsible for advising and supporting the Divisional Business Unit management in the implementation of the QMS and specific project quality requirements.

**Senior Quality Manager(s)**

The Senior Quality Managers report to the Divisional Quality Leads for each Divisional Business Unit.

Senior Quality Managers are required to support the application of the Quality Policy and of the QMS across their allocated part of the business. Within this they may identify to the Health & Safety Director ways in which the QMS and its application may be improved.

The Senior Quality Manager(s) is line manager for the Quality Managers within their Division. The senior role is responsible for managing and supporting the Quality Managers within their divisional remit.

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**2. ORGANISATION AND ARRANGEMENTS (CONTINUED)****2.2 Responsibility for Quality Management (Continued)****Quality Managers**

Quality Managers (both visiting and where project resident) are part of the divisional team responsible for ensuring effective implementation of the QMS. Where there is no Senior Quality Manager, they report directly to the Divisional Quality Lead.

The responsibilities of a Quality Manager are to:

- Ensure that VolkerFitzpatrick's quality management procedures and guidance are appropriate and maintained to reflect any changes in requirements
- Inform, guide and support the workforce in creating workplaces with a positive culture that support the production and delivery of high-quality products and services with zero defects delivery
- Discuss current and future works and the inspection requirements necessary to achieve conformance with specification
- Carry out auditing in accordance with company procedure Q03 *Audit* to ensure compliance with existing requirements, including but not restricted to the requirements of the QMS
- Ensure that reports and / or improvement plans are compiled where necessary to enable corrective action to be implemented by site management
- Ensure thorough investigations are completed and appropriate records are compiled where incidents occur, and make recommendations to prevent recurrence
- Maintain their competence through continual professional development
- Adhere to the professional code of conduct as set through membership of the Chartered Quality Institute (CQI)
- Identify opportunities for improvement

**Rail Standards and Compliance Manager**

Reporting to the Health & Safety Director is responsible for:

- Establishing the rail specific QMS requirements in line with BS EN ISO 9001:2015
- Working in close collaboration with the IMS Manager to ensure legal, sector specific, and other requirements are integrated within the QMS
- Compliance Auditing / Monitoring / Surveillance of project teams and of the project delivery supply chain against rail standards and requirements

**Corporate Responsibility Director**

The Corporate Responsibility (CR) Director is responsible for the implementation and development of sustainable business practices throughout VW UK shared services and business units, to maintain compliance to corporate, legal, and stakeholder requirements. Reporting to the VW UK CEO, the responsibilities of the CR Director are:

- Oversight of health, safety, environment, quality and sustainability activities and staff across VW UK business units
- Oversight of corporate governance and risk management
- Development of CR strategy through a strategic view of the business environment
- CR management reporting and communications within VW UK and to VolkerWessels
- Management of the integrated management system, its related systems and applicable memberships, affiliations and registration schemes
- Provision of occupational health services to VW UK and its business units
- Commitment to the growth and development of employees, including the delivery of training services and external course provision
- Development of sustainable business practices including the selection and integration of tools and techniques



**2. ORGANISATION AND ARRANGEMENTS (CONTINUED)****2.2 Responsibility for Quality Management (Continued)****Corporate Responsibility Director (Continued)**

- Understanding the role of government, business, NGOs, society, global and local issues and how they interact with each other and their impact on VW UK
- Development of systems and protocols, including IT platforms, to support the needs of the business units
- Lead officer for major incidents and provision of legal support services

**Integrated Management Systems Managers**

Reporting to the CR Director, the Integrated Management Systems (IMS) Managers are responsible for:

- The coordination of activities related to the implementation, development and maintenance of the QMS
- Control, publishing and maintenance of the IMS within the document management system

**Commercial / Estimating / Procurement Managers**

It is the responsibility of the Commercial, Estimating and Procurement Managers to:

- Ensure subcontractors and suppliers working on behalf of VolkerFitzpatrick are aware of the quality policy and practice document and provided with the site specific procedures and environmental management plans
- Ensure the procurement policy is communicated to all subcontractors and suppliers
- Check the quality certification and performance of suppliers and subcontractors
- Arrange audits of suppliers and subcontractors with the Quality Manager
- Undertake an HSEQ start up meeting with the appointed subcontractor or supplier at contract award

**Shared Services Departmental Heads**

It is their responsibility to:

- Establish the processes and procedures for their areas of responsibility and incorporate them within the QMS, in accordance with Q01 *Control of Documented Information - Overview*
- Ensure departmental staff are aware of, and implement, the parts of the QMS applicable to them
- Be instrumental in creating workplaces with a positive culture that support the production and delivery of high-quality products and services with zero defects

**All Employees, Subcontractors and any other Persons Working on our Behalf**

It is their responsibility to:

- Understand the parts of the QMS applicable to them and cooperate with management / supervision in its implementation
- Follow the instructions given regarding methods of work for particular tasks
- Keep equipment in good order, use the correct equipment for the task, and report any defects in plant and equipment or any shortcoming in construction methodology to their manager / supervisor
- Be instrumental in creating workplaces with a positive culture that support the production and delivery of high-quality products and services with zero defects
- Raise any quality concerns or non-conformances

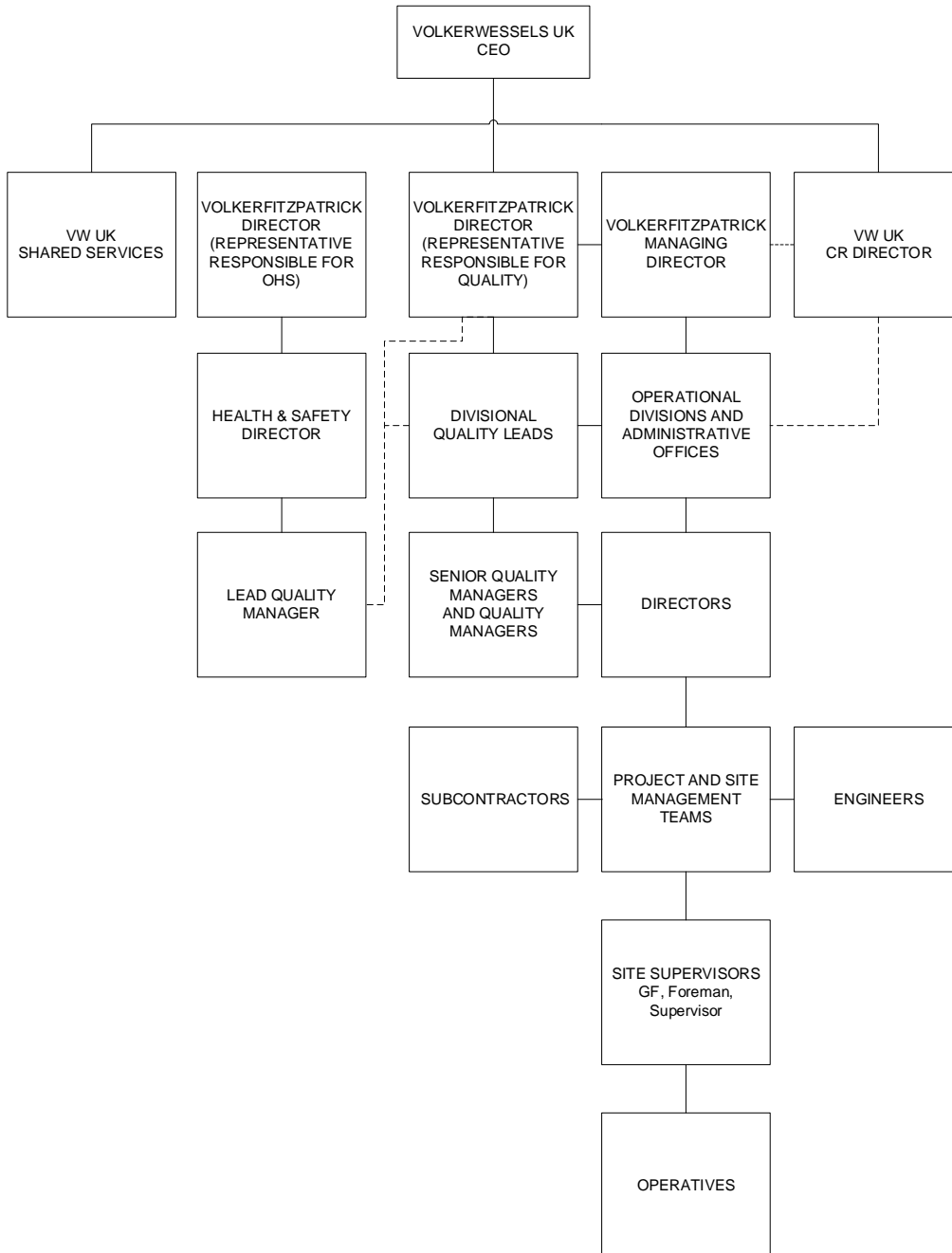
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**2. ORGANISATION AND ARRANGEMENTS (CONTINUED)**

**2.3 Organisation and Structure**

The company is managed by the board of directors, with the structure for quality management as detailed below:





## 2. ORGANISATION AND ARRANGEMENTS (CONTINUED)

### 2.4 Interested Parties

BS EN ISO 9001:2015 requires the Interested Parties of an organisation to be determined; Interested Parties include people or organisations that can affect, be affected by, or perceive themselves to be affected by a decision or activity of VolkerFitzpatrick / VolkerWessels UK. VolkerFitzpatrick understands the importance of meeting the requirements of its Interested Parties. Interested Parties (including their needs and expectations) that are affected by the VF QMS include:

Interested Parties	Needs and Expectations
<ul style="list-style-type: none"> <li>VW UK Employees</li> </ul>	<ul style="list-style-type: none"> <li>Quality of work / life, Job Security, challenge, personal and professional development, career opportunities.</li> </ul>
<ul style="list-style-type: none"> <li>Shareholders (e.g. VW NL)</li> </ul>	<ul style="list-style-type: none"> <li>Sustainable growth and profitability.</li> </ul>
<ul style="list-style-type: none"> <li>Sub-contractors</li> </ul>	<ul style="list-style-type: none"> <li>Surety of work, paid on time, collaborative working, respectable working environment, desire to work with a responsible organisation.</li> </ul>
<ul style="list-style-type: none"> <li>Clients / Customer</li> </ul>	<ul style="list-style-type: none"> <li>High level of service delivery, on time and on budget, in line with client expectations.</li> </ul>
<ul style="list-style-type: none"> <li>Suppliers</li> </ul>	<ul style="list-style-type: none"> <li>Information of what is required and when, payment terms are met.</li> </ul>
<ul style="list-style-type: none"> <li>Government agencies</li> </ul>	<ul style="list-style-type: none"> <li>Compliance to applicable requirements</li> </ul>
<ul style="list-style-type: none"> <li>Regulatory bodies</li> </ul>	<ul style="list-style-type: none"> <li>Compliance to all regulatory and statutory requirements</li> </ul>
<ul style="list-style-type: none"> <li>Local community</li> </ul>	<ul style="list-style-type: none"> <li>Considerate construction company when working within local communities.</li> </ul>
<ul style="list-style-type: none"> <li>General Public</li> </ul>	<ul style="list-style-type: none"> <li>Minimal disruption to their everyday lives, enhancing the infrastructure and communities.</li> </ul>

Q19 *Determining the Context of our Organisation* further explains our Interested Parties.

### 2.5 Quality Objectives, Continual Improvement and Key Performance Indicators

VolkerFitzpatrick is committed to continually improving performance across all its activities. To ensure that we are achieving the best delivery outcomes possible, we need to measure our performance against our stated objectives. VolkerFitzpatrick has established a number of Key Performance Indicators (KPIs) that help us to measure our performance.

The results of these KPIs help us to identify areas that need attention, and by changing our processes to deal with these areas we continually monitor the appropriateness and seek to improve the effectiveness of the QMS.

Objectives are established in agreement with 'top management'. These objectives set targets which relate to the KPIs, as well as other requirements according to the current needs of the organisation.

The Objectives follow a cascade from VolkerWessels UK corporate, through VolkerFitzpatrick and its business and on to projects. This allows review of ongoing performance against goals and measurable targets at all levels in a co-ordinated manner.

Each project is required to develop its own specific delivery objectives reflecting the terms of project contract scope and requirements. Project objectives are set out within the project Quality Management Plan.

**2. ORGANISATION AND ARRANGEMENTS (CONTINUED)****2.6 Communication**

VolkerFitzpatrick is committed to involving all of its employees in the management of quality. We will ensure that our objectives are communicated to employees in a range of ways, including individual meetings, team briefings, memos, notice boards, and other means, and we welcome and act upon employee feedback in order to maintain continual improvement.

Our requirements for quality are communicated to our supply chain via the procurement process during supplier on-boarding, tendering, project pre-start, and within on-going management and supervisor meetings throughout the execution of the works. Regular reporting and open dialog on quality will be maintained with customers, project stakeholders and other interested parties during delivery of the works – methods to include formal meetings, documented reports, and / or Newsletters as appropriate.

**2.7 Management Review**

At least once a year, VolkerFitzpatrick holds a management review of its QMS, as detailed within the procedure Q07 *Management Review*.

Minutes of the review are issued to appropriate parties, and any changes that are required as a result of the review are incorporated into the management system. Management system changes are communicated through the 'Record of Revisions', emailed to all employees on a monthly basis.

Review includes consideration of external and internal issues that are relevant to VolkerFitzpatrick business purpose and strategic direction. Further, identification and review of issues that could affect the business's ability to achieve the intended results of its quality management system including those other management control systems operating within the scope of the QMS.

Management review also incorporates consideration of project feedback and review of performance.

The continued appropriateness of the QMS is reviewed regularly against the size and scope of the business, its markets, legislative change, and client and stakeholder requirements. Any intended changes, modifications, extension of scope are agreed with senior management and the VolkerWessels UK Corporate Governance and IMS teams.

**2.8 Organisational Knowledge**

VolkerFitzpatrick captures operational lessons learnt and best practice from across the business. The process utilises a Microsoft Power APP as the electronic data vehicle for upload, reading and download of Lessons Learnt (LL) data. Information is gathered from various sources, including project and business forums.

The Lessons Learnt Process has been developed in order to identify areas of learning from positive and negative experiences at all stages throughout the lifecycle of a project. It applies to all VolkerFitzpatrick operating divisions and projects and includes pre-construction activities and framework contracts.

The process is described within Q05 *Lessons Learnt*.

### 3. RESOURCE MANAGEMENT

#### 3.1 VolkerFitzpatrick Employees

We take care that the Directors and Departmental Managers allocate responsibilities to those who have the appropriate competence (skills, knowledge and experience) for their role.

The VolkerFitzpatrick Mission Statement is - "Working together to Experience Excellence for our clients and our people." Delivery against the mission statement is supported by key business drivers, the 6Cs, setting out the parameters within which all staff are expected to operate as a business:

- Challenge yourself and others
- Communicate with the team
- Certainty of programme
- Cost awareness
- Campaign against rework
- Care about our people, projects and business

Staff needs assessment of technical, engineering specific and role specific competency is undertaken against a skills matrix. Further, VolkerFitzpatrick is committed to offering training opportunities for all employees, and training needs are identified at annual Personal Development Reviews.

Functional roles are outlined in job descriptions where identified as appropriate for the role concerned.

#### 3.2 External Resources

We use a number of external resources to help us with our work, including subcontractors, suppliers and consultants. When selecting external resources, we use our Business Management System, Workspace to store information regarding each organisation.

All external resources must adhere to the requirements of our QMS, unless operating under their own QMS which should be registered to BS EN ISO 9001:2015 by a UKAS certified registration body.

#### 3.3 The Working Environment

VolkerFitzpatrick is committed to providing a safe and suitable working environment. We take care to ensure that we provide appropriate resources, such as buildings, equipment, transport and supporting services, and that they are maintained in a condition that enables our employees to work safely and to meet VolkerFitzpatrick's and our clients' objectives.

### 4. PROJECT DELIVERY

#### 4.1 Initial Capability Assessment

VolkerFitzpatrick selects projects that we know we have the resources to deliver, to meet client requirements, and that fit into our overall business plan. This means that we consider issues such as the type and size of project, geographical location, the nature of the client and their needs, and available resources.

#### 4.2 Risk and Opportunities Management

VolkerFitzpatrick utilises quality risk management towards the identification, assessment, and prioritisation of risk as the effect of uncertainty, whether positive or negative, on our delivery performance objectives. This taken with a coordinated and efficient application of resources and processes seek to:

- Achieve intended performance results
- Prevent, or reduce undesired effects
- Maximise the realisation of positive opportunities
- Achieve improvement

Project risks are identified, assessed, mitigated and/or controlled throughout:

- During the project Tender / Bid process - Go / No Go assessment & authorisation
- Design delivery risk assessment - Design / Engineering assessment
- Project Enablement review

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#### **4. PROJECT DELIVERY (CONTINUED)**

##### **4.2 Risk and Opportunities Management (Continued)**

- Using the live Project Risk Register
- Internal Divisional performance reporting
- Business / Senior Management reporting

##### **Quality Risk Management**

With specific reference to potential risks in delivering the required quality of product on site, each project will establish and maintain a management process (quality risk assessment - QRA) to undertake concise formal review of quality risk towards the safe, accurate and efficient delivery of the works. A Quality Risk Register is to be used across all stages of the Project lifecycle.

The project delivery team is required to review quality risks and opportunities at regular intervals. Reviews are also to actively include designers, sub-contractors, installers and/or service supply specialist as appropriate.

##### **4.3 Quality Planning**

Within all stages of our business activity, we incorporate appropriate quality planning techniques to ensure we:

- Fully recognise the delivery objectives and requirements against the service we provide
- Have in place the necessary management, and process control mechanisms and procedures to assure successful delivery
- Undertake appropriate verification, validation, monitoring, measurement, inspection and test activities to ensure delivery standards are achieved and maintained
- Ensure we have the records needed to provide evidence that the service and resulting product delivery accurately meet requirements

##### **4.4 Supply Chain Procurement**

Tendering processes ensure that we, and our supply chain, clearly recognise and can meet the project requirements. Selection of suppliers / subcontractors is to be undertaken with reference to a regularly updated list of approved suppliers is in place and maintained (on Workspace).

The Project team will, with the assistance of the Procurement department, use our procurement processes to ensure that we follow the correct procedures for procurement throughout the project. Suppliers / subcontractors will be issued with a copy of our contractors Policy which sets out the VolkerFitzpatrick (VF) requirements for Occupational Health and Safety, Quality & Environmental Management on its projects.

##### **4.5 Delivering the Project**

During construction, there are a number of processes that must be adhered to; these include development of the *Site Management Plan (SMP)* or *Construction Phase Plan (CPP)*, which summarises the actions that must be applied in order to meet client requirements for the project.

##### **4.6 Client Related Processes**

When specific processes or requirements are specified by the client / employer the project will review them against the current VFL QMS and project quality plan. Any additional requirements shall be incorporated within the project QMP and briefed to the project team to ensure all are aware of these specific requirements and the project is working to comply.

##### **4.7 Change Management**

All projects are required to implement, manage and maintain an effective change control process, which addresses the various elements of change control including:

- Identification of change
- Reacting to change
- Evaluation of change
- Response to change in formal documentation
- Authorisation
- Implementation of change by designers and constructors
- Recording and reporting of all changes

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**4. PROJECT DELIVERY (CONTINUED)****4.7 Change Management (Continued)**

- Monitoring actual costs of change

All projects utilise Workspace to ensure that the latest information related to change to delivery requirement is always available to relevant project personnel. Workspace also be used to manage the effective notification of any changes to service requirement, performance specification, or delivery requirement, together with identification of any impact arising out of change.

**4.8 Project Handover and Closure**

VolkerFitzpatrick projects will put in place a completion strategy to ensure a planned approach to undertaking all handover activities and closure of any outstanding or deferred works. Further, that any minor defects and / or snags are cleared in a timely manner.

Under the strategy, handover plans may be prepared appropriate to the scale of each individual or linked project works.

**Post-project Delivery Activities**

Each project will establish a post project delivery plan that will be agreed with the Client. This may be in the form of an Aftercare agreement. The Divisional Directors are accountable for ensuring that this has been undertaken for each project.

**5 MEASUREMENT, ANALYSIS AND IMPROVEMENT**

VolkerFitzpatrick uses a number of measurement techniques to help us analyse and improve our performance.

**5.1 Client Satisfaction**

Obtaining client / customer feedback is a vital part of VolkerFitzpatrick's internal review of project delivery performance. Recognising the realities of obtaining customer satisfaction feedback, VolkerFitzpatrick applies to one of six main process streams:

1. Use of QMF-76 *Client Satisfaction Report* as applicable, applied monthly to all projects
2. Use of QMF-76 *Client Satisfaction Report* as applicable applied at other intervals as agreed with client / employer / customer
3. Use of *Customer Care Pack* as applicable, directly applied to identified major project by the Customer Care Manager
4. Use of a client project performance Scoring mechanism (such as Network Rail's PRISM protocol)
5. Use of client / VF project minuted meeting(s) to capture and respond to issues
6. Use of client / VF project performance scoring during project Visualisation Meetings

The Project Manager is to confirm with the project client / employer's representative, via a statement within the Project Quality Plan, which one of the above processes will be utilised.

**5.2 Audit and Surveillance**

An audit is most easily described as a formal assessment of the application of agreed processes and ultimately procedure(s). An audit is not activity based (that is a surveillance), it is process based. VolkerFitzpatrick's internal auditors will perform periodic checks on the application of our QMS in accordance with procedure Q03 *Audit* to determine effectiveness and company-wide conformance to the system.

From time to time we are also audited by external bodies (third parties), such as clients, trade organisations and the BSI. These audits will demonstrate conformance to our QMS, current performance, our ability to meet their requirements and where appropriate conformance to standards such as BS EN ISO 9001:2015 and ISO 44001:2017.

Surveillance is an observational technique of assessing a chosen delivery activity for compliance against an appropriate plan of action, most usually an Inspection and Test Plan (ITP). Surveillance tests the application of measures and controls identified within the ITP, and hence assesses the confidence level that the output of the activity observed will be compliant against the Plan. Project surveillances are undertaken against an agreed schedule.

Approved for IMS:	IMS Manager	Document owner:	Health & Safety Director	Workspace file:	n/a	Page 18 of 20
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## 5 MEASUREMENT, ANALYSIS AND IMPROVEMENT (CONTINUED)

### 5.3 Control of Non-Conformance

BS EN ISO 9000:2015 defines 'non-conformity' as 'non-fulfilment of a requirement', where 'requirement' is a 'need or expectation that is stated, generally implied or obligatory'.

The control of non-conformance is undertaken by the application of a management process to identify the cause of error or failure, and the application of effective corrective action to prevent reoccurrence.

Operating procedure Q04-VF *Non-Conformance and Corrective Action* defines and describes the methods by which VolkerFitzpatrick identifies, documents, controls and evaluates non-conformance. Further, how it applies correction, corrective action, learning and continual improvement from identified non-conformance. It also outlines the responsibilities and requirements for corrective action and close-out.

Q04-VF *Non-Conformance and Corrective Action* describes the introduction and use of an electronically managed non-conformance process using a Microsoft PowerApps product (PC, Tablet or Mobile phone use).

The 2022 NCR App is to be used for the documenting and management of VolkerFitzpatrick Project raised non-conformances with regard to quality assurance of service and product. It is also to be used for documenting internal quality management audit of projects, plus targeted audits as defined in VolkerFitzpatrick rail procedure R10 *Rail Quality Management*.

#### Management of Defects

The term 'defect' is used within various forms of contract such as NEC, JCT and typically described as "a part of the works which is not as stated in the Works Information, or not in accordance with applicable law, or the accepted design".

The management of defects is undertaken by the application of a management process to ensure project service, or product deliverables meet the requirements stated within the contract terms / information.

The management of defects is undertaken the project teams in accordance with Q04 Non Conformance and Corrective Action process and Q04-01 *Non-Conformance Report*. These processes will be used to achieve resolution of the defect.

### 5.4 Corrective Action

Corrective action is the action taken to eliminate the cause of an identified non-conformity. It is the action taken to deal with the root-cause of the situation.

### 5.5 Q04-VF *Non-Conformance and Corrective Action*, defines how non-conformances, including complaints from the client, are reviewed in order to determine the required action. Performance Evaluation

VolkerFitzpatrick monitors project delivery trends via data collected from various sources, including KPIs site inspections, internal reviews, non-conformances, audits, client satisfaction surveys, feedback on our supply chain, etc. The data is analysed to discover how effectively the business, its divisional units and individual projects are performing.

Performance headlines are reported monthly and regularly presented to the senior management team (top management) for review.

### 5.6 Analysis of Data

The results that we collect from KPIs, internal reviews, non-conformances, audits, client satisfaction surveys, feedback on our supply chain, etc. are analysed to discover how effectively we are performing and where there are weaknesses in our QMS. In this way we can identify areas for improvement.



**5 MEASUREMENT, ANALYSIS AND IMPROVEMENT (CONTINUED)****5.7 Continual Improvement**

Continual improvement of our QMS is achieved by using the data we collect, as described above, as well as through employee feedback and management reviews, to revise and improve our systems and processes.

We also define annual QIPs which are monitored both to measure the implementation of the planned actions and also the impact (improvement) of the QIPs actions. This is reported monthly to the Board via the Divisional Quality Managers and Divisional Directors.

**6 IMS AUTHORISATION****Document owner approval:**

**Andrew Battye**, Health & Safety Director - 27.01.2023

**Approval for IMS:**

**Alex Boatwright**, IMS Manager - 27.01.2023

## Waterman Group – Meeting Quality Standards

Waterman Group is a multidisciplinary consultancy providing sustainable solutions to meet the planning, engineering design and project delivery needs of the property, infrastructure, environment and energy markets. Waterman is part of CTI Engineering, the leading Japanese engineering consultancy.

Waterman Infrastructure & Environment (WIE) is a leading environmental consultancy, specialising in a broad range of services, with a focus on understanding our clients' business needs and advising how best to mitigate the risks they face on their projects to meet their strategic objectives. From complex and contentious urban regeneration projects, through to international corporate acquisitions, Waterman is the go to consultancy to ensure environmental, health and safety risks are fully understood in the commercial context.

Waterman companies operate within an Integrated Management System (IMS), a combined environmental management, occupational health & safety management and quality management system, certified to the international management system standards ISO 9001, ISO 14001 and ISO 45001.

Specifically for the Radlett Strategic Rail Freight Interchange (SRFI) Scheme, WIE has collated and reviewed the previously available information on ground conditions, designed and overseen ground investigations and developed the geotechnical and drainage designs for the landscaping bunds. WIE will prepare the necessary assessments to support a deposit for recovery permit application. WIE has also advised on waste management and regulation matters including the interaction between environmental permitting and the CL:AIRE Definition of Waste: Development Industry Code of Practice. The team working on the project includes chartered professionals with extensive experience of similar sites.



## We are Waterman, where every project matters

We deliver progressive, sustainability-driven environmental and engineering consultancy services across every sector. We think differently, and we're harnessing our collective expertise to deliver greener, healthier and well-connected communities, networks and built environments.

Based in strategic locations throughout the UK and Ireland, our team of specialists is at the forefront of tackling the climate emergency and forging a path to a Net Zero built environment.

### UK & Ireland Office Locations

