Brinsham Lane – Gravel Hill Haul Road Proposals, Chipping Sodbury

Landscape and Ecology Management Plan

Heidelberg Materials UK Ltd

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Appendices

Acronyms and Abbreviations

ARC	Amphibian and Reptile Conservation
BC	Biodiversity Champion
ECoW	Ecological Clerk of Works
HML	Heidelberg Materials UK Ltd
HMP	Habitat Management Plan
LEMP	Landscape and Ecology Management Plan
LVS	Landscape and Visual Statement
SAC	Special Area of Conservation
SNCI	Site of Nature Conservation Interest
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage Systems

1.0 Introduction

1.1 Background

SLR Consulting Limited (SLR) was commissioned by Heidelberg Materials UK Ltd (HML), formerly Hanson, to provide a Landscape and Ecological Management Plan (LEMP) to inform management operations for the landscape and ecological proposals associated with the proposed construction of a temporary haul road to link to link Southfields and Brinsham West Quarries, Yate (planning ref. P22/02019/F), referred to as 'Proposed Development'.

The Site is situated between Gravel Hill Road and Brinsham Lane, Chipping Sodbury, South Gloucestershire, Wiltshire, BS37 7BT, hereafter referred to as 'the Site'.

A Planning application to South Gloucestershire Council (SGC) was initially submitted by Tetra Tech. This application was submitted and validated in April 2022. A LEMP was produced by TetraTech and submitted to accompany the planning application which was subsequently deemed by the LPA and client to require updates and refinements, and has informed this document.

This LEMP incorporates the guidelines as included in the previous LEMP. As illustrated in Drawings CHR-001 Illustrative Landscape Strategy during Operation and CHR-002 - Illustrative Landscape Strategy after Restoration (Appendix A), this LEMP sets out the overarching landscape and ecological management objectives and implementation and maintenance procedures for the Proposed Development.

This document should be read alongside the drawings, as included in Appendix A.

1.2 Site Location

The Site, approximately 1.25 ha in size, is located north of Chipping Sodbury, South Gloucestershire and is centred at Ordnance Survey National Grid Reference ST723846 (Drawing CHR-001, Appendix A).

The Site comprises an area of land, in pastoral uses, between Brinsham Lane to the north, Little Brinsham Farm to the east and Gravel Hill Road to the south. The site encompasses small sections of woodland to the north and south around Brinsham Lane and Gravel Hill Road. There is a waterbody approximately 50m south and built-up areas approximately 250m south.

1.3 Development Proposals

HML submitted a planning application to SGC under the reference noted above (P22/02019/F). The proposed development is for the construction of a temporary haul road connecting the consented Brinsham West Quarry to the north with Southfields Quarry to the south.

The proposed access route comprises a single carriageway with two passing bays interspersed along the roue and a concrete culvert portal unit spanning the Ladden Brook (see Appendix A of the Addendum Report)[1].

[1] Updated Planning Statement – Brinsham West Quarry Access Road, SLR Consulting, October 2024

The indicative landscape strategy is provided in the Drawing CHR-001 Landscape Strategy During Operation and CHR-002 - Landscape Strategy During Restoration. The proposals included within this LEMP differ from the proposals previously submitted as part of the planning application (ref. P22/02019/F). These proposals have been developed as part of a carefully considered design process, in response to comments received from the Landscape Officer[2] on the previously submitted scheme.

Revisions relate to the landform modifications associated with the construction of the temporary haul road, alignment of road with passing spaces, and proposed screening vegetation and bund, and proposals associated with restoration of the landscape to its baseline condition, relative to the previous submissions. Full details are included with the planning submission and have been assessed in a separate Landscape and Visual Appraisal, produced by SLR Consulting in 2024, to accompany this application.

1.4 Aims and Objectives of the LEMP

The aim is to ensure appropriate long-term management of area within the Site in order to protect and enhance the biodiversity of the site and surrounding area for the duration of construction and operation of the temporary haul road, and through the restoration phase. The final aim will be to return the Site to the baseline landform and reinstate grassland and vegetation cover, by translocation of established planting, and from replacement of locally sourced and stored original soil with a seed resource of grassland species, where possible.

The plan sets out how contingencies and/or remedial action will be identified, agreed, and implemented so that the development still delivers the fully functioning landscape and biodiversity objectives of the originally approved scheme.

1.5 Limitations

The LEMP considers the unique features of the site, the local area and the development and is based on currently available information. If before or during implementation of this plan, the development is altered substantially, or significant new ecological information comes to light, then the LEMP should be revised accordingly by a suitably qualified person.

1.6 Proposed Development

Full details of the proposed development are included with the planning application, which comprises Drawings - Appendix A: LVA plans, Landscape and Visual Appraisal (LVA), Planning Statement, Ecological Appraisal Report, and CEMP, prepared by SLR Consulting Ltd.

The proposals associated with the operational phase of the temporary haul road, as illustrated on Drawing CHR-001(Appendix A), include:

- Modified landform profile associated with the temporary haul road; alignment and design of landform modifications to follow the existing profile of the holloway;

[2] Received on 14 April 2022 (screening opinion P22/011/SCR and pre-application advice PRE20/0702), and 14 June 2023.

- Existing vegetation retained and protected as far as possible. Veteran ash tree retained and protected;
- New stone retaining wall (built as vernacular stone wall) proposed along the periphery of the root protection area of the veteran tree. The retaining wall ensures any reprofiling to the bank here can be minimised;
- Screening bund landform along the southeastern edge of the Site, which has been greatly reduced from the previous scheme; and
- Planting proposals to include reseeding of modified landform areas, new native scrub planting along screening bund and native species rich hedgerow mix planting to infill gaps around proposals where vegetation will be lost as a result of the construction activities.

The proposals associated with the restoration phase after removal of the temporary haul road, as illustrated on Drawing CHR-002 (Appendix A), include:

- Regrading and restoration of the holloway to its existing baseline profile. The retaining wall will be retained taking into account an established habitat around the wall, over the operational period of the haul road;
- Well established screening vegetation translocated to reinstate gaps in existing hedgerows after removal of the haul road; and
- Planting proposals to include reseeding of regraded areas, new hedgerow and tree planting to reinstate any additional gaps in planting.

1.7 Landscape Design Objectives

The landscape design objectives are as follows:

- Develop the established landscape strategy during operational (CHR-001) and restoration phases (CHR-002), as submitted, to provide a strongly defined and clearly understood landscape structure for the Proposed Development;
- Respect the Root Protection Areas (RPAs) of retained trees and vegetation with areas and belts of new planting and new habitats to enhance the biodiversity and amenity value within the site;
- Minimise the loss of hedgerow and trees, (including Veteran Ash tree) through appropriate protection measures and translocation, as key landscape features and as habitat corridors;
- Enhancement of existing roadside hedgerow with additional native hedge and shrub planting;
- Creation of new temporary habitats such as scrub planting and reinstated grassland on modified and restored landform areas, designed to enhance the existing landscape features;
- Reinstatement of permanent areas of pasture after cessation of activities associated with the temporary haul road; and
- Reinstatement of woodland and hedgerow along Brinsham Lane and Gravel Hill Road.

1.8 Management Objectives

The management of the proposed landscape (existing and proposed habitats and features) will seek to address the following management objectives:

- Secure the long-term establishment of the landscape infrastructure;
- Establish a flexible maintenance regime that delivers the core design and management objectives, as well as addressing any arising management issues;
- Reinforce and reinstate degraded vegetation features;
- Enhance landscape features through sensitive and proactive management, providing clear arrangements for the long-term maintenance and management and/or enhancement of the green infrastructure assets;
- Maintain and diversify the nature conservation value of the site, for example grassland areas and native hedges, new native woodland planting, planting around existing and proposed, and management of existing woodland and hedgerows;
- Manage the site to achieve the habitat conditions as specified in the ecology reports; and
- To ensure that the management allows the scheme to achieve the design intentions while promoting sustainable practices and ensure the safety and security of those using the Site.

Where the methodologies and measures set out in this LEMP are followed, it is considered that all relevant legislation will be complied with, and the biodiversity and landscape value of the site will be enhanced.

1.9 Extent of Proposed Planting

The proposed planting has been aligned with the proposals as indicated on Drawings CHR-001, CHR-002 and CHR-007 (Appendix A) and comprises of the following areas of existing and proposed vegetation/habitat;

- Existing vegetation – trees/woodland and hedgerows along Site boundaries, including translocated sections of existing hedgerows;
- Proposed native and wet woodland planting;
- Proposed native hedgerows (including infilled sections within existing gappy hedgerows);
- Proposed native scrub planting; and
- Proposed (and reinstated) grassland areas.

1.10 Responsibilities

A CEMP has been produced for this scheme and should be read in conjunction with this report to ensure general best practice is followed and that all works on site seek to avoid, minimise and mitigate their environmental impact (Tetra Tech, 2023a and SLR, 2024).

The Quarry Manger will be responsible for implementing the LEMP, assisted and advised by HML's in-house Landscape Team, or by any appointed Ecological Clerk of Works (ECoW) or

approved landscape contractors, where relevant. They will be familiar with this report and have sufficient authority and presence on site to influence activities.

General responsibilities of the HML Landscape Team during the Construction, Operational and Restoration Phase are:

- Implementing the LEMP;
- Ensuring that the contractors employed are suitably qualified and experienced to undertake management works, whilst maintaining the ecological value of the site;
- Providing to the land management contractors and the project ecologist, all information required to allow them to carry out appropriate habitat and landscape management during the construction phase. This includes any updated versions of this LEMP and other related management plans, which will be circulated as soon as possible after being received; and
- Contacting ecologist or relevant organisation if any issues arise.

Where additional issues are identified, or where it is considered that revised maintenance regimes are needed, changes to management prescriptions will be undertaken, as appropriate.

1.11 Monitoring and Review

The effectiveness of the proposed management regime should be assessed for each area, against the management objectives set out in paragraph 1.8 and adjusted accordingly.

The various tasks contained within the LEMP should be reviewed annually for first 2 years, and subsequently, once in 5 years. This process will identify where the existing management regime requires modification to meet management objectives, both annually and in the long-term.

Any trees or plants which, within the first 2 seasons after planting, are removed or become seriously damaged or diseased, shall be replaced in the next planting season with others of a similar size and species, thereafter only with those species which appear to be thriving on site and sufficient to achieve a minimum 90% overall stocking with no significant gaps.

2.0 Baseline Information

2.1 Habitats

The following habitats were recorded in the UKHab Survey and referenced within the Ecological Appraisal Report (SLR, 2024). A summary has been included below.

- The majority of the Site is covered by other neutral grassland. Two distinct grassland types were present within this field is a species poor mown section, and a longer, species rich tussocky sward. Along the banks within the site is another area of other neutral grassland which has a longer more tussocky sward with scattered scrub in the form of blackthorn sapling (*Prunus spinosa*).
- The site contained hedgerows and two lines of trees. Along the edge of Gravel Hill Road was a species rich native hedgerow which was managed and species rich. On either side of Brinsham Lane are two lines of trees, which are outgrown hedgerows, these were situated on small banks.
- North of Ladden Brook is an area other lowland mixed deciduous woodland. Woodland within the field contained self-seeded blackthorn, common hawthorn, elder, ash, and spindle (*Euonymus europaeus*). Whilst the area of woodland north of Ladden Brook contained more mature examples of the above species and English oak (*Quercus robur*).
- The understorey species included common nettle, bluebell, cleaver, ivy, herb Robert (*Geranium robertianum*), lesser celandine, lords and ladies, and wood speedwell (*Veronica montana*). A strip of other lowland mixed deciduous woodland is a plantation (on the southern side of Gravel Hill Road and the quarry edge. This contained similar species but also included hazel (*Corylus avellana*) and sycamore (*Acer pseudoplatanus*).
- The section of woodland between Brinsham Lane and Ladden Brook had wet ground with scrub species present and was considered to be wet woodland. All tree species were relatively short around 5m in height.
- Ladden Brook runs across the northern section of the site and is classified as other rivers and streams. The water was relatively clear and fairly deep in the section within the site. Some aquatic and marginal vegetation was present such as water mint.
- A veteran ash tree is present within the northeastern end of the site. Veteran trees are considered irreplaceable habitats.

2.2 Species

A full list of protected plant and animal species is included within the Ecological Appraisal Report (SLR, 2024). Some of these have been summarised below.

- The grassland, hedgerows, and woodland provide suitable habitats for common reptile species. The fields are considered to contain scattered scrub and tall tussocky swards, which are optimal habitat for commonly occurring reptile species. Due to small scale nature of the Site, reptile surveys are not deemed necessary. There is ample habitat suitable for reptiles within the wider landscape.

- The Site contained suitable habitat for ground nesting birds such as skylark (*Alauda arvensis*). In addition, the hedgerows and woodland also provided suitable habitat for nesting birds. Foraging, and commuting bats may utilise the site. Existing vegetation being retained and proposed vegetation would provide suitable habitat for this species.
- No badger setts were observed during the survey within the Site or within 30m and no evidence of badgers were observed.
- No signs of presence of otters, in Ladden Brook, were found and no holts were observed 50m up or downstream. The habitats within some areas of the site are potentially suitable for water voles. Due to small scale nature of the Site and proposed development, surveys are not deemed necessary for this application.
- Previously undertaken checks (TetraTech, 2021) found no evidence of dormouse it is therefore considered highly unlikely that dormouse could have populated the woodland within the last few years due to the behaviour of this species. Dormouse is therefore considered to be absent from the Site.

3.0 Proposed Habitats – Establishment and General Aftercare

The following section of the LEMP outlines the different vegetation/ habitat types and how these vegetation/ habitat types will be established on site. Indicative plant species for the habitats outlined below are included within Appendix B of this document – Indicative Plant Schedule.

3.1 Protection of Existing Vegetation and Ecological Features During Construction

All trees retained as part of the development proposals, including the veteran ash tree, will be protected in accordance with the provisions of BS 5837:2012 'Trees in Relation to Design, Demolition and Construction - Recommendations'. Protection measures will be implemented on site in accordance with the measures outlined in the CEMP.

3.2 Proposed Vegetation/Habitats

3.2.1 Proposed Native Woodland and Wet Woodland Mix

Two areas of native woodland are proposed to the north and south, around Brinsham Lane and Gravel Hill Road. This area will comprise a mix of native shrubs and trees which have been carefully selected to enhance and reflect the existing vegetation.

3.2.2 Proposed Native Scrub Mix

Areas of native scrub planting are proposed on the screening bund, along the south-east edge of the haul road. They provide both habitat and foraging opportunities for wildlife, along with performing a screening function.. Areas of native scrub will be planted at 1.5m-2m centres and managed for landscape and biodiversity value.

3.2.3 Proposed Native Hedgerow Mix

New hedgerows will comprise locally native species which are characteristic of the hedgerows of the local landscape, will provide suitable foraging and nesting opportunities for a broad range of wildlife and reinforce the existing pattern of hedgerows. These will create green corridors around the site which will link to existing and retained hedgerows, and to other habitats beyond the site.

Where necessary, existing hedgerows would be reinforced with new native hedgerow planting to enhance the existing landscape character, help contain visual effects of the proposed development and strengthen the existing green infrastructure network within the site. For cohesion across the site, this planting mix would align with the proposed native hedgerows. However, the density of these sections of hedgerow may have to vary as the planting would have to take into consideration the condition of the existing hedgerow.

3.2.4 Proposed Grassland Areas

Throughout the site there will be areas of reinstated meadow, both of the temporary landform during the operational period and on completion of the final restoration. While natural regeneration from the soil seed bank will be the preferred means of reinstatement of

the previous grassland habitats, this will be enhanced where necessary by over-seeding either with locally hand-collected seed or alternatively a suitable commercial seed mix of UK provenance such as Emorsgate EM31 or similar.

3.3 General Establishment and Aftercare Considerations

All vegetation will be managed with the aims of improving wildlife habitat value whilst remaining practical given the character of the Site. All areas of proposed and existing planting should take account of the below general aftercare considerations. In addition to these tasks the proposed vegetation types, as well as existing, will require more specific management operations to ensure their longer-term establishment.

3.3.1 Proposed Tree, Scrub and Hedgerow Planting

A long-term maintenance strategy will encourage establishment and optimise the potential success of the newly created habitats. Best practice measures include the following:

- Planting stock will comprise forestry transplants and whips of locally native tree and shrub species suited to the site and soil conditions. Woodland is expected to be achieved by natural regeneration of willow species from windblown seed, but additional planting will be necessary both to enrich areas where natural colonisation may be inadequate, to provide increased species diversity and improved future structure, and to achieve establishment of woodland blocks, where natural colonisation is less likely to be successful.
- Trees and shrubs will be notch-planted at 2m -3m centres in small groups of 3-5 of each main species or 1-3 of shrubs and minor species, with plants offset either side of rip lines, to reduce regimented appearance, with trees and shrubs in random intimate mixture, and with soil conditions influencing exact choice of species.
- Wet woodland blocks will be planted at average 4m centres where necessary depending on extent of natural regeneration, with species selected according to micro-topography and soil wetness.
- All stock will be individually guarded from rabbits and deer using tree shelters and spiral guards appropriate to the species and size of stock used.
    - 1.2m Tubex tree shelters will be used for 40-60cm transplants of palatable tree species, supported by treated softwood stake;
    - 60cm Tubex shelters for shrub transplants with bushy growth habit and species less vulnerable to deer, supported by square treated softwood stake;
    - 60cm clear spiral guards for less palatable 40-60cm transplants of shrub species and taller 90-120cm tree whips, supported by bamboo cane.
- A 50mm deep layer of Bromide free bark mulch (12-35mm diameter chips) will be spread across all planted areas to assist with weed control (1m diameter around the base of all trees) whilst planting establishes, except in woodland areas, as advised by ecologist.
- All weeds in min. 90cm diameter spot around all trees and shrubs will be controlled by applications of Roundup herbicide (or similar) applied by knapsack sprayer in spring for at least the first 2 years, with a second late summer application if

necessary. No herbicides are to be applied within 10m of any watercourse or waterbody.

- Tall grass and noxious weeds between trees will be strimmed in late summer, if necessary prior to noxious weeds setting seed, alternatively noxious weeds will be spot-sprayed in spring with an appropriate selective herbicide.
- Natural regeneration of willow saplings will be cut back by brushcutter/clearing saw where necessary, to prevent suppression of planted species.
- All plant losses will be replaced like-for-like within the first 2 seasons after planting, thereafter only with those species which appear to be thriving on site and sufficient to achieve a minimum 90% overall stocking with no significant gaps.
- Planting to be undertaken between November and March to encourage new specimen survival rates. Planting not to be undertaken in waterlogged conditions (water sitting on the soil surface or pooled in the bottom of the hole) or in frozen soil.
- Watering visits will be undertaken as necessary in the event of sustained dry periods and severe drought stress affecting planted stock.
- Visual inspections should be carried out twice a year, during the establishment years (at the start and end of the growing season in March and October) to check for good strong foliage, and growth, and the success of habitats, so that the most suitable management regime/operations can be defined for the forthcoming year. This would reduce to annual inspection after the proposed vegetation is established
- No fertiliser application for planting areas, given that all natural soils will be carefully stripped and utilised for the temporary landform modifications for the operational phase, and then re-used for final restoration to baseline landform profile.

3.3.2 Translocated Vegetation

There are sections of existing and proposed vegetation, that are proposed for translocation within the site, with indicative areas of vegetation to be translocated, illustrated on Drawings CHR-001, CHR-002 and CHR-007 (Appendix A of this document). Translocation will be used at operational phase, for initial hedge gapping to utilise vegetation affected by construction works along the northern and southern edges of the Site, and then at restoration phase, to relocate the proposed scrub planting at the south east corner corner of the site, to be used to reinstate both roadside hedgerows and also within the footprint of haul road at both northern and southern ends of the site.

The translocation procedure will be informed by the provisions, principles and methodology in the CEMP, for operation phase and for the subsequent translocation of scrub at restoration phase.

The location and depth of receiving planting pits will be determined based on site conditions and following trial excavation of donor stock to establish rootball depth, which would be dug progressively, to ensure that prompt restoration of vegetation to be translocated.

The vegetation should be relocated to the receiving planting pit on the same day, to prevent it from either drying out or becoming waterlogged. Translocation should only be carried out between end of September to end of March to avoid disturbance to nesting birds.

Vegetation to be translocated will be coppiced to c.300mm preferably one year prior to proposed translocation, to enable to set the plants upright upon translocation. All cut material is to be removed from site, unless identified otherwise.

The vegetation should be lifted in whole pieces of practical size according to the machinery available, ensuring that the rootballs of shrubs and trees remain intact. During the excavation, strong loppers/sharpened mattock/chainsaw shall be used to free roots and branches where necessary to prevent them being torn (e.g. cut any roots larger than 15mm diameter size to leave clean ends). A tree root cutting blade may be used if any pollarded trees need to be undercut. Each section of excavated vegetation is to be transported immediately to the receptor planting pits before the next section of vegetation is excavated. Sections are to be planted in the same orientation as their original growing position (i.e. not rotated).

On completion of the translocation works, erect stock proof style protective fencing along either side of the translocated sections of new hedgerow adjacent to reinstated pasture.

As translocated vegetation establish, together with any infill planting, their growth height should be allowed to increase to a natural height to align with the adjacent exisitng planting.

A monitoring visit would be undertaken between April and August, to review initial growth in year 1. This would include watering (by tractor and bowser) in first summer after planting if necessary and gapping up with planted whips in the event of failure.

Translocated hedges should be allowed to increase through natural regeneration over time.

3.3.3 Grassland Areas

To prepare areas for reinstating grassland, works to the seed bed must first remove undesirable species using repeated cultivation or a herbicide. Then plough or dig to bury the surface vegetation.

The required mix should then be sown in the spring or early autumn (dependent on construction program) onto bare ground after harrowing/raking the surface and should not be sown on compacted ground. The seed must be surface sown and can be applied by machine or broadcast by hand. Rolling is not necessary. Preparing a seed bed on clay can be difficult as it is prone to compaction and poor drainage. Well-timed preparation and sowings are therefore important to successful establishment. As clay is unworkable when very wet or very dry, autumn sowings may not be possible. It is sometimes better to dig or plough the soil in the autumn, allow winter frosts to break down the clods, and prepare a seedbed in the spring using a harrow or rake to produce a medium tilth. To get an even distribution, divide the seed into two or more parts and sow in overlapping sections to ensure full coverage.

After sowing lightly rake or harrow the surface to settle the seed in. Take care not to bury the seed at depth. Firm with a roll, or by treading, to give good soil/seed contact. The newly seeded areas should be fenced off using pegs and tapes until the grass is well established.

General management guidelines for grassland areas, during the operational and restoration phase, have been outlined below:

- All management operations requiring vegetation removal, including pruning, should have regard to the bird nesting season (running from March to late August inclusive) and any potential disturbance to bird habitats should be avoided during this time and/or ecological supervision provided.

Operational Phase

- During the establishment period (the first 2-3 years) the grassland areas would be subject to annual mow or strim in about August/September each year once grasses and wildflowers have set seed, to maintain the desired height. Arisings would be collected and removed from site to prevent nutrient enrichment. After the grassland has established, cutting would be undertaken depending on vigour of sward.
- Upon establishment, the management regime would introduce grazing along the grassland areas reinstated on the temporary landform modifications (subject to agreement with the landowner). A stock-proof fence would be erected along the edge of the operational haul road, on both west and east side of the road.
- Within the fenced operational areas along the temporary haul road, for the areas that would not be managed by grazing, a low maintenance regime of bi-annual cutting would be adopted.

Restoration phase

- Similar to the operation phase, after landform is restored back to original profile of the holloway, for the first 2 years, the grassland areas would be subject to annual mow or strim in about August/September each year once grasses and wildflowers have set seed, to maintain the desired height. Subsequently, the land would be returned to pastoral uses,

- Watering, weeding and repair of all erosion and settlement with re-seeding shall be undertaken, during the establishment period for both phases, as required to establish a uniform and healthy stand.
- Once sward is sufficiently mature to tolerate selective herbicide applications, anticipated by year 2, a suitable selective herbicide will be applied to control all noxious broadleaved weeds, either as a spot application by napsack sprayer in the case of sparse weed growth, or alternatively by small boom sprayer mounted on quad bike, in the event of more extensive weed infestations.
- Similar to the planting areas, no fertiliser application for grassland areas, given that all natural soils will be carefully stripped and utilised for the temporary landform modifications for the operational phase, and then re-used for final restoration to baseline landform profile. Given the site's previous arable use, it is unlikely that soils will be deficient in any major nutrients, therefore no additional fertiliser applications are anticipated during the aftercare period.

3.4 Existing Vegetation/Habitats

In addition to the proposed habitats, the existing habitats such as trees and hedgerows would be managed as outlined below.

3.4.1 Existing Trees

- Retained trees will be inspected and any maintenance carried out as necessary in accordance with the HML's policy and contracts with approved arboricultural contractors.

3.4.2 Existing Hedgerows

- Existing hedgerows would be cut prior to installation of any new native planting. It may also be necessary to carry out hedgerow laying if existing hedgerows have become gappy at their bases prior to installation of new planting.
- Infilled sections of hedgerow shall be allowed to grow to the corresponding height as the existing hedgerows they have been planted next to; and also, allowed to fill out to form a continuous hedgerow edge.
- Existing roadside hedge maintenance will be undertaken by Highways Authority.
- Ground flora will be allowed to develop beneath the hedgerows/ unmown margins to enhance their function as a wildlife corridor.
    - o impacts to root systems, such as associated with vehicle compaction through vehicle movements within RPAs, should not be undertaken between November and March; and
    - o following pruning operations, all significant arisings (cuttings), such as large branches, should be removed from the site.

4.0 Funding Mechanism

HML has a reliable funding mechanism, common to all its active extraction sites across the country, for ensuring that costs of all its reclamation and landscape management commitments are met and accrued for. This annual update procedure involves the Heidelberg in-house landscape team assessing current costs of all its future commitments for site reclamation, landscape management, biodiversity and estate management operations, and dividing this by the total tonnage of permitted mineral reserve at that site, to arrive at a pence-per-tonne accrual rate. This accrual is applied to every tonne of product that is sold, and each site accrues its own restoration fund on the Company's balance sheet, which is budgeted for and allocated for expenditure on reclamation works as and when required.

Appendix A Drawings

Brinsham Lane – Gravel Hill Haul Road Proposals, Chipping Sodbury

Landscape and Ecology Management Plan

Heidelberg Materials UK Ltd

SLR Project No.: 425.065060.00001

22 October 2024

Legend:

- Site boundary
- Existing vegetation
- Veteran Ash tree and associated RPA (Note 1)
- Indicative extent of existing vegetation lost (Note 1, 2 and 3)
- Existing contours (Note 2)
- Existing overhead power lines
- Landform profile (contours) associated with haulage road (Note 2, 3, 4, 5 and 6)
- Proposed haulage road (Note 2, 3 and 4)
- Proposed visibility splays (Note 2)
- Proposed retaining wall (Note 3, 4, 5 and 6)
- Proposed native tree and scrub planting
- Indicative extent of proposed translocated hedgerow

Notes:

1. Information taken from drawing by ArbTS (Tree Constraints Plan - 1115.1) received 12.03.2024, and from aerial photograph.
2. Alignment of the haulage road, associated visibility splays and existing contour information are taken from SLR drawing (Proposed Haul Road - 407.064518.00001-PD01) dated 23.02.2024. (Only 2D data available; 3D data / levels not available).
3. Landform modifications as shown on the plans, are indicative. Detailed levels information will be provided, as part of pre-commencement conditions.
4. In the absence of levels information along the proposed alignment of the road, we have extrapolated the gradient along the road to work with the existing levels on either end of road at Gravel Hill Road and Brinsham Lane. The levels shown on the sections are indicative and illustrative only.
5. Landform modifications (cut and fill) to avoid infringement of RPAs of retained vegetation, as far as possible.
6. Any landform modifications within RPA's to be undertaken in accordance to the arboriculturalist's guidance/supervision, as appropriate.

Rev	Amendments	Date	By	Chk	Auth
4	Minor Updates	25/09/2024	IG	CK	CK

SLR

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Client: Heidelberg Materials

Project: BRINSHAM LANE -GRAVEL HILL HAUL ROAD PROPOSALS , CHIPPPING SODBURY

Figure Title: ILLUSTRATIVE LANDSCAPE STRATEGY DURING OPERATION

Scale	SLR Project No.
1:1250 @ A3	065060

Designed	Drawn	Checked	Authorised
IG	IG	CK	CK
Date 08/03/2024	Date 08/03/2024	Date 08/03/2024	Date 08/03/2024

Figure Number: CHR-001 Drawing Number: 425.065060.00001.29.001 Rev: 4

Legend:

- Site boundary
- Existing vegetation
- Veteran Ash tree and associated RPA (Note 1)
- Existing contours (baseline topography) (Note 2)
- Landform associated with haulage road indicated as 'ghosted lines' (Note 9)
- Indicative restored landform (Notes 3, 5, 7 and 8)
- Retaining wall retained as part of restoration phase (Note 6 and 7)
- Proposed areas of reinstated vegetation - native tree and hedgerow
- Line indicating extent of translocated vegetation introduced at operation phase

Notes:

1. Information taken from drawing by ArbTS (Tree Constraints Plan - 1115.1) received 12.03.2024, , and from aerial photograph.
2. Existing contour information taken from SLR drawing (Proposed Haul Road - 407.064518.00001 -PD01) 23.02.2024. (Only 2D data available; 3D data / levels not available).
3. Landform modifications as shown on the plans, are indicative. Detailed levels information will be provided, as part of pre-commencement conditions.
4. In the absence of levels information along the proposed alignment of the road, we have extrapolated the gradient along the road to work with the existing levels on either end of road at Gravel Hill Road and Brinsham Lane.
5. As part of the restoration phase, landform to be reprofiled as close to the original landform where possible, subject to detail design.
6. Retaining wall along veteran tree to be retained as part of the restoration phase, owing to its integration within the landscape during operation phase.
7. Landform modifications (cut and fill) to avoid infringement of RPAs of retained vegetation, as far as possible.
8. Any landform modifications within RPA's to be undertaken in accordance with arboriculturalist's guidance, as appropriate.
9. Landform profile changes introduced as part of the haulage road tied in to the reprofiled landform at restoration phase, as far as possible, and to avoid any infringment of RPAs of retained vegetation.

Rev	Amendments	Date	By	Chk	Auth
2	Minor amendments	25-09-2024	IG	CK	CK

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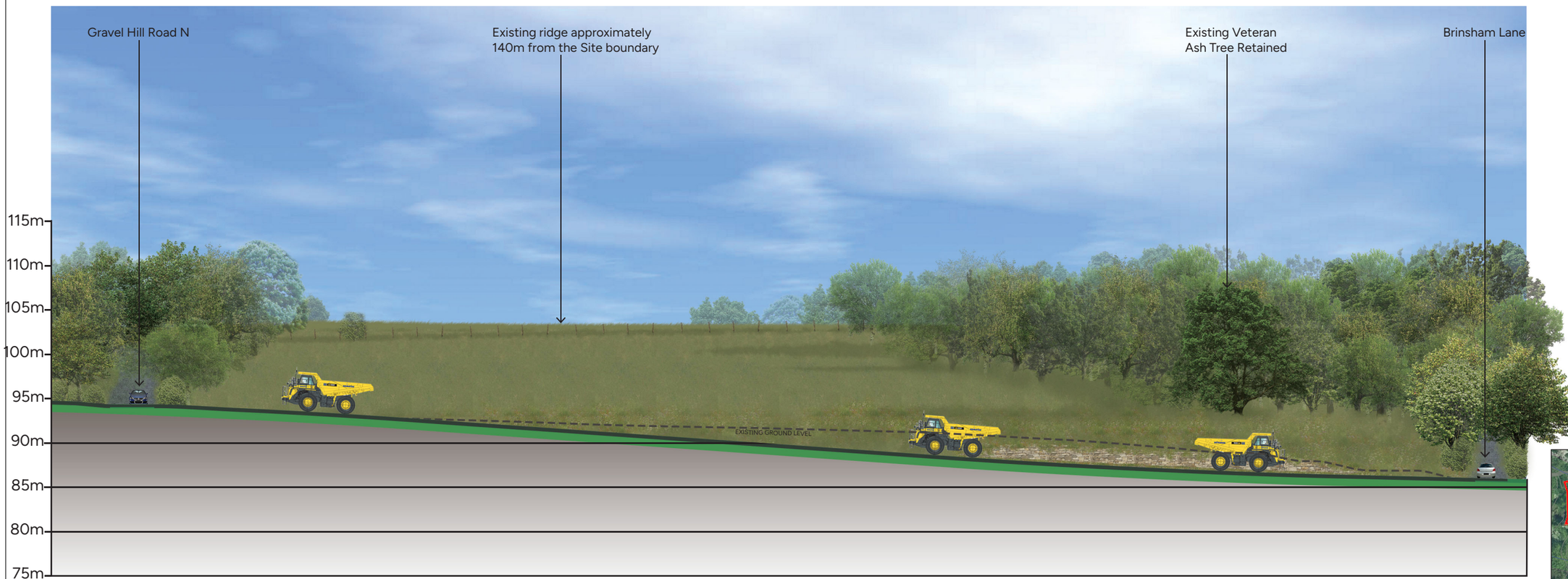
Project: BRINSHAM LANE -GRAVEL HILL HAUL ROAD PROPOSALS , CHIPPPING SODBURY

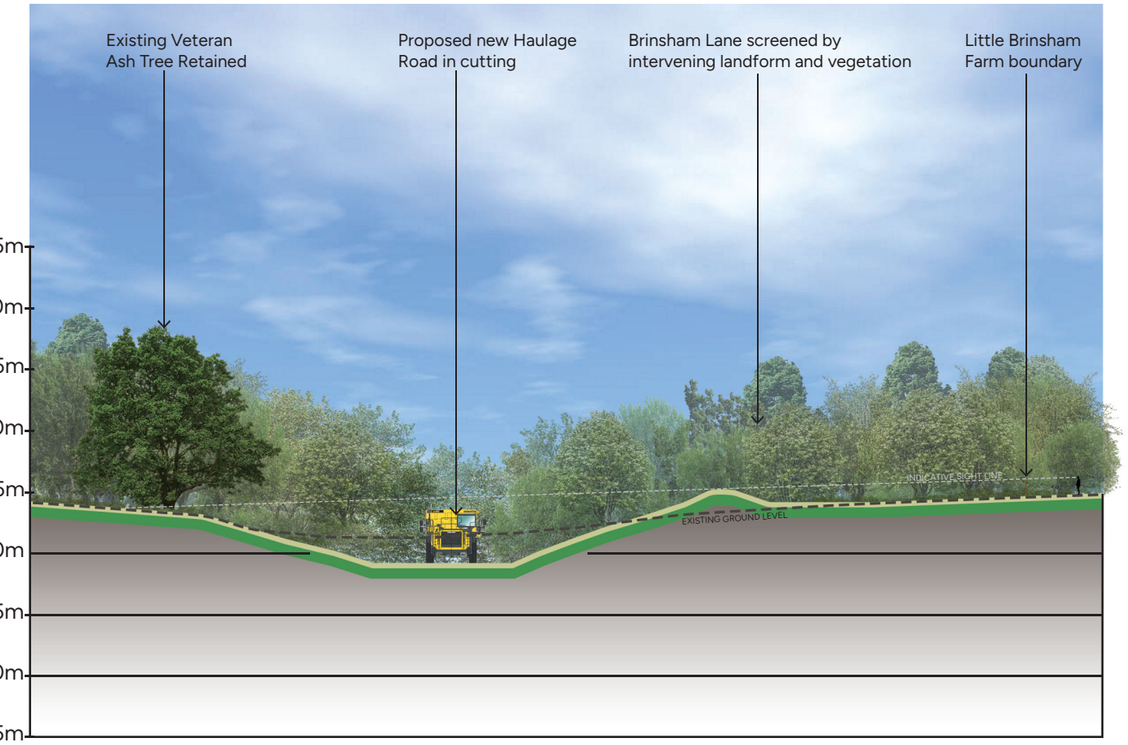
Figure Title: ILLUSTRATIVE LANDSCAPE STRATEGY AFTER RESTORATION

Scale	SLR Project No.		
1:1250 @ A3	065060		
Designed	Drawn	Checked	Authorised
IG	IG	CK	CK
Date 08/05/2024	Date 08/05/2024	Date 08/05/2024	Date 08/05/2024

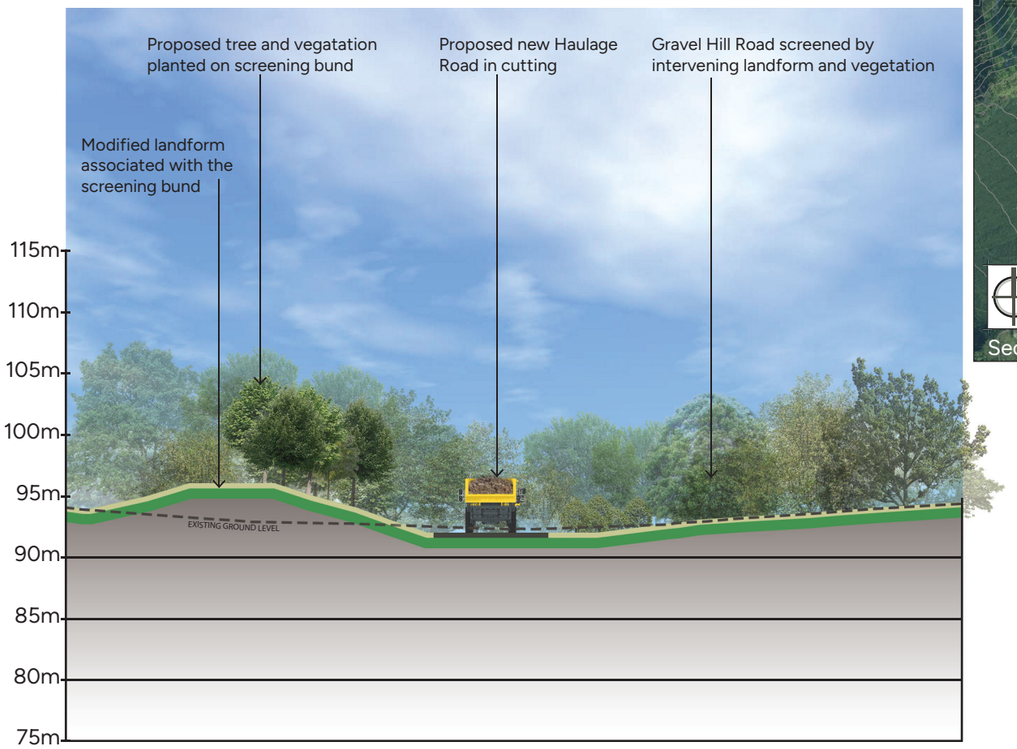
Figure Number: CHR-002 Drawing Number: 425.065060.00001.29.002 Rev. 2



Section A-A, through haulage road, looking west (Scale 1:500)



Section B-B, across new haulage road, looking north towards Brinsham Lane (Scale 1:500)



Section C-C, across new haulage road, looking south towards Gravel Hill Road (Scale 1:500)

0 5 10 15 20 30 40 50m

Scale 1:500 (Metres)

Notes

1. Levels shown are indicative only. Detailed levels information will be provided, as part of pre-commencement conditions.
2. In the absence of levels information along the proposed alignment of the road, we have extrapolated the gradient along the road to work with the existing levels on either end of road at Gravel Hill Road and Brinsham Lane. The levels shown on the sections are indicative and illustrative only.
3. Section BB - ● Indicative line of sight assumed from this location.

Section Locations

Rev	Amendments	Date	By	Chk	Auth
4	Minor Amendments	25/09/24	IG	CK	CK

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Project: BRINSHAM LANE -GRAVEL HILL HAUL ROAD PROPOSALS , CHIPPPING SODBURY

Figure Title: ILLUSTRATIVE CROSS SECTIONS

Scale	SLR Project No.
1:500 @ A3	065060

Designed	Drawn	Checked	Authorised
IG	IG	CK	CK
Date 06/04/2024	Date 06/04/2024	Date 06/04/2024	Date 06/04/2024

Figure Number: CHR-006 Drawing Number: 425.065060.00001.29.006 Rev. 4

Species	Common Name	Size (cm)	Wet Woodland %	Lowland Mixed Broadleaved Woodland %	Native Scrub Mix %	Native Hedgerow Mix %
Acer campestre	Field maple	40-60	10	15		10
Alnus glutinosa	Common alder	80-100	10			
Betula pendula	Silver birch	80-100	5	15		
Betula pubescens	Downy birch	80-100	10			
Cornus sanguinea	Dogwood	40-60	5		10	
Corylus avellana	Hazel	40-60	10	10	15	20
Crataegus monogyna	Hawthorn	40-60	10	5	15	30
Euonymus europaeus	Spindle	40-60		2.5	5	
Fagus sylvatica	Beech	80-100		10		
Ilex aquifolium	Holly	2 litre		5	5	10
Ligustrum vulgare	Wild privet	40-60	5		5	5
Malus sylvestris	Crab apple	40-60			5	5
Prunus avium	Wild cherry	40-60		10		
Prunus spinosa	Blackthorn	40-60	5	7.5	5	10
Quercus robur	English oak	40-60	10	15		
Rhamnus cathartica	Purging buckthorn	40-60			10	
Rosa canina	Dog rose	40-60			10	5
Salix caprea	Goat willow	80-100	10			
Sambucus nigra	Elder	40-60		2.5	5	
Viburnum lantana	Wayfaring tree	40-60		2.5	5	
Viburnum opulus	Guelder rose	40-60	10		5	5
Total %			**100**	**100**	**100**	**100**
Plant spacing			**2m centres**	**2m centres**	**1.5m centres**	**4 plants per linear metre in double staggered row**

Legend:

Site boundary

On Site Planting Proposals

Proposed planting to be translocated as part of the restoration phase

Indicative area of receiving translocated vegetation. To be verified based on site conditions

Translocated hedgerow receiving area; To be verified based on site conditions

Hedgerow to be reinstated - Restoration phase

Off Site Planting Proposals

Wet woodland planting

Existing hedgerow to be reinforced with new planting

Native trees/tree group planting

NOTES:

Tree planting numbers to be confirmed and replacement numbers to be aligned with guidance as published, 'Trees and Development Sites', April 2021.

Rev	Amendments	Date	By	Chk	Auth
1	Plant Schedule update.	10/24	TB	CK	CK

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BRINSHAM LANE -GRAVEL HILL HAUL ROAD PROPOSALS , CHIPPPING SODBURY

Figure Title

ILLUSTRATIVE ON SITE AND OFF SITE LANDSCAPE PLANTING PROPOSALS

Scale: NTS @ A3

SLR Project No. 065060

Designed	Drawn	Checked	Authorised
CK	TB	CK	CK
Date 26/09/2024	Date 26/09/2024	Date 26/09/2024	Date 26/09/2024

Figure Number: CHR-007

Drawing Number: 425.065060.00001.29.007

Rev. 1

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Appendix B Indicative Plant Schedule

Brinsham Lane – Gravel Hill Haul Road Proposals, Chipping Sodbury

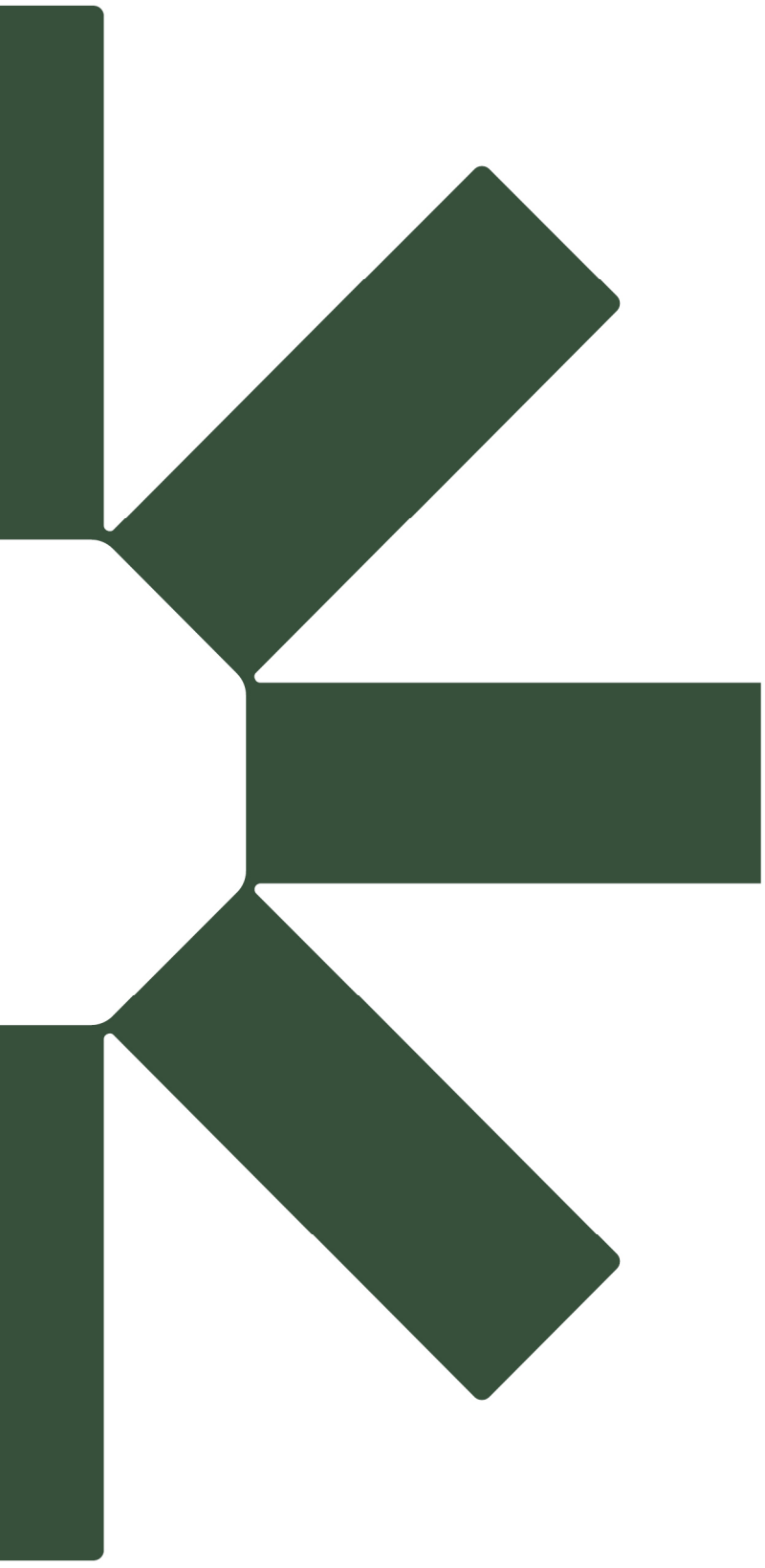
Landscape and Ecology Management Plan

Heidelberg Materials UK Ltd

SLR Project No.: 425.065060.00001

22 October 2024

Species	Common Name	Size (cm)	Wet Woodland %	Lowland Mixed Broadleaved Woodland %	Native Scrub Mix %	Native Hedgerow Mix %
Acer campestre	Field maple	40-60	10	15		10
Alnus glutinosa	Common alder	80-100	10			
Betula pendula	Silver birch	80-100	5	15		
Betula pubescens	Downy birch	80-100	10			
Cornus sanguinea	Dogwood	40-60	5		10	
Corylus avellana	Hazel	40-60	10	10	15	20
Crataegus monogyna	Hawthorn	40-60	10	5	15	30
Euonymus europaeus	Spindle	40-60		2.5	5	
Fagus sylvatica	Beech	80-100		10		
Ilex aquifolium	Holly	2 litre		5	5	10
Ligustrum vulgare	Wild privet	40-60	5		5	5
Malus sylvestris	Crab apple	40-60			5	5
Prunus avium	Wild cherry	40-60		10		
Prunus spinosa	Blackthorn	40-60	5	7.5	5	10
Quercus robur	English oak	40-60	10	15		
Rhamnus cathartica	Purging buckthorn	40-60			10	
Rosa canina	Dog rose	40-60			10	5
Salix caprea	Goat willow	80-100	10			
Sambucus nigra	Elder	40-60		2.5	5	
Viburnum lantana	Wayfaring tree	40-60		2.5	5	
Viburnum opulus	Guelder rose	40-60	10		5	5
Total %			**100**	**100**	**100**	**100**
Plant spacing			**2m centres**	**2m centres**	**1.5m centres**	**4 plants per linear metre in double staggered row**



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