

OMEGA ZONE 8, ST HELENS Omega St Helens Ltd / T. J. Morris Limited



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Omega St Helens / T. J. Morris Limited

OMEGA ZONE 8, ST. HELENS

Environmental Statement Volume 1 - Main Text OPP DOC.11.3 Chapter 3: Description of the Proposed Development



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3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

3.1 INTRODUCTION

3.1.1. This chapter provides a description of the Proposed Development, including a description of how the Proposed Development would be constructed, alongside the assumptions used for the basis of assessment where this information is subject to confirmation. This description aligns with what planning consent is sought for, and, is what the technical assessments are based upon (technical chapters 6 to 16).

3.2 OVERVIEW OF THE PROPOSED DEVELOPMENT

- 3.2.1. The application site, shown by the red line boundary in **Figure 1.1: Application Site**, would occupy an area of approximately 75 ha.
- 3.2.2. The Proposed Development is subject to a hybrid planning application for both detailed and outline planning permission and is described as follows:

'Hybrid Planning Application for the following development (major development);

- (i) Full Planning Permission for the erection of a B8 logistics warehouse, with ancillary offices, associated car parking, infrastructure and landscaping; and
- (ii) Outline Planning Permission for Manufacturing (B2) and Logistics (B8) development with ancillary offices and associated access infrastructure works (detailed matters of appearance, landscaping, layout and scale are reserved for subsequent approval).'
- 3.2.3. Detailed planning permission is sought for the erection of a B8 logistics warehouse, referred to as Unit 1, comprising of a 77,084 sq.m (829,725 sq.ft) warehouse with 4,486 sq.m (48,287 sq.ft) of ancillary office development, overall total 81,570 sq.m (878,012 sq.ft) covering a site area of approximately 35 ha.
- 3.2.4. Outline planning permission for a combination of B2 Manufacturing and B8 Logistics (Ref. 3.1) development is sought across the remainder of the application site, which measures approximately 40 ha and includes potential future expansion land for the occupier of Unit 1. At this stage it is envisaged that the outline part of the application site will capable of accommodating up to 123,930 sq.m (1,333,9710 sq.ft) of employment development, spread across the Unit 1 expansion land and three separate warehouse buildings to the south (Units 2, 3 and 4). Access has been brought forward as a reserved matter (given that the majority is shown within the full planning site) but all other matters such as landscaping, layout, appearance and scale have been reserved for future approval.

AIMS OF THE PROPOSED DEVELOPMENT

- 3.2.5. The land subject of the Proposed Development is a natural extension to the highly successful employment location known as Omega, which over recent years has proven a highly desirable location for the UK's logistics and manufacturing industry. The Proposed Development will enable the continued success of the area as a generator of jobs and attractor of investment.
- 3.2.6. The delivery of new high-quality premises and supporting amenity services will attract new business investment and jobs to the area, provide an increase in additional gross value added through construction and business activities and an uplift in business rates.

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3.2.7. Situated immediately to the west of the existing Omega site, the application site provides an excellent opportunity to expand an existing employment area and deliver new large scale industrial and warehousing floor space, infrastructure and green space in St. Helens. The application site is located centrally within the Bold Forest Area Action plan boundary and will contribute towards enhancing the footpaths, cycleways and bridle paths. Of particular note is the opportunity to enhance the existing Public Right of Way (PRoW) at the north western corner of the application site with an upgraded route and crossing over the M62 providing a link between Omega and St. Helens.

PLANNING CONTEXT

- 3.2.8. St. Helens Council has identified in their emerging Local Plan 2020-2035 (submission draft January 2019) that the Borough has economic activity and employment rates, skill levels and average wages well below national averages. It has become clear that the existing availability of employment land and premises in St. Helens is not sufficient to meet market requirements, leading to missed investment and job opportunities. However, St. Helens Borough is well placed to provide new employment in a variety of locations to meet the needs of modern businesses, including helping to address the sub-regional need for large scale logistics developments.
- 3.2.9. Omega Business Park has been identified as a major development area with potential to deliver significant economic, environmental and social benefits. Omega is experiencing continued strong demand by logistics companies as a result of changes in shopping patterns through increased online shopping and trading. In addition, the excellent transport links in the area and access to a large workforce in and around St. Helens, Warrington and the North West, makes this is an ideal location for employment development.

3.3 PLANS AND DESIGN ASSUMPTIONS

3.3.1. The Proposed Development is illustrated in **Figure 3.1** and a series of visualisations in **Appendix 3**. This figure is supported by a series of design principles which provide supplementary details. These design principles are outlined below alongside any necessary assumptions for the purposes of the EIA.

PLANNING APPLICATION BOUNDARY

3.3.2. All temporary and permanent activities relating to the construction and operational activities of the Proposed Development would be contained within the planning application boundary as illustrated in **Figure 1.3: Planning Extents**. The EIA is based upon this planning application boundary which totals approximately 75 ha, but due to the hybrid nature of the application, comprises a site area of approximately 35 ha for the detailed proposals and approximately 40 ha for the outline proposals.

PROPOSED DEVELOPMENT LAYOUT / LAND USE

- 3.3.3. Unit 1 will be formed by a 77,084 sq.m (829,725 sq.ft) warehouse with 4,486 sq.m (48,287 sq.ft) of ancillary office development comprising of a 3-storey structure providing main reception / staff facilities / goods in and transport office to form an overall total 81,570 sq.m (878,012 sq.ft) building.
- 3.3.4. The development will be served by a private car park containing 576 parking spaces, including up to 35 disabled spaces, 48 motorcycle and 156 cycle spaces. The proposals may also include enlarged parking spaces, however the number of spaces to be provided is not yet known. Provision will also be made for up to 39 electric vehicle spaces. The warehouse will also incorporate a service yard with 383 HGV / trailer parking spaces.

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- 3.3.5. Unit 1 will be located in the north section of the wider application site, immediately to the south of the M62 and west of the existing Omega South development.
- 3.3.6. The outline planning proposals, which will extend to the south of Unit 1 but also include an area of future expansion land for Unit 1 (to the east), are for up to 123,930 sq.m (1,333,9710 sq.ft) of employment development, spread across the Unit 1 expansion land and three separate warehouse buildings to the south (Units 2, 3 and 4).
- 3.3.7. In total the floorspace proposed within the redline totals 205,500 sq.m (circa 2,210,500 sq.ft). It is proposed that there will be a 30% B2 / 70% B8 split within this total floorspace.
- 3.3.8. A key part of the proposals is the creation of a sustainable transport connection between St. Helens and the Omega development. The Proposed Development therefore incorporates a central pedestrian/cycle route that will link the existing pedestrian bridge that crosses the M62 in the north west corner of the application site with the existing Omega development through a connection point on Catalina Way.
- 3.3.9. The Proposed Development also includes the provision/creation of two landscape and ecology mitigation buffer areas within the application site. The larger of which is referred to as the "Green Wedge" and is situated in the north west corner of the application site immediately south of the M62 and west of Unit 1. This green infrastructure area, covering approximately 7 ha, offers opportunities for extensive habitat creation, specifically for biodiversity action plan (BAP) species. The second area will line the western boundary of the application site adjacent to Units 2 and 4 for approximately 730 m.
- 3.3.10. These areas will provide opportunities for replacement tree planting, pond creation and recreational open space. In addition to the 'Green Wedge', green spaces which provide landscape, ecological enhancements and attenuation are proposed along the boundaries of the Proposed Development and along the main proposed access and circulation routes. Further details are provided in the Landscape Strategy Section.

BUILDING MATERIALS/FAÇADE(S)

- 3.3.11. For Unit 1 the proposed building materials are as follows:
 - Warehouse Walls Horizontally laid trapezoidal profiled cladding in the following colours:
 - White Real Authentic Likeness (RAL) 9003;
 - Ice Blue RAL 230 80 10;
 - Adventure / Alsaka Grey RAL 7000; and
 - Basalt / Slate Grey RAL 7012.
 - Office Walls Horizontal composite microrib panel in the following colours
 - White RAL 9003;
 - Adventure / Alsaka Grey RAL 7000; and
 - Basalt / Slate Grey RAL 7012.
 - Roof Profiled steel cladding (Goosewing Grey RAL 080 70 05) with translucent non-fragile glass reinforced plastic roof lights, PVC lined pre-galvanised steel gutters and projecting eaves



with PPC profiled steel fascia (Higher Level – Ice Blue RAL 230 80 10; Lower Level – Basalt / Slate Grey RAL 7012)

- Doors as follows:
 - Free standing steel & glass entrance canopy with painted galvanised steel columns White -RAL 9003;
 - Metal Personnel Doors painted to match Basalt / Slate Grey RAL 7012;
 - Electrically operated steel sectional Loading Doors with vision panels painted to match Basalt / Slate Grey – RAL 7012; and
 - Electrically operated steel sectional Dock Levellers Doors with vision panels painted to match Basalt / Slate Grey RAL 7012.
- Windows (offices only) PPC Window frames and curtain walling with grey tinted anti-sun glazing and grey lookalike panel spandrels where required. External Frame - Basalt / Slate Grey RAL 7012 and Internal Frame White RAL 9003.
- 3.3.12. For the remainder of the application site, where the proposals are in outline only, no details of the proposed external materials are known at this stage. However, it is assumed, given the proposals comprise B2/B8 uses, that the materials will reflect the operational requirements associated with general industrial/logistics development, whilst striving to maintain the high-quality design and finishes already established on the rest of the Omega site. This will ensure a high-quality environment and provide a visual connection between the Proposed Development and the rest of the Omega development that will provide a context for the development.

OPERATIONAL ACCESS AND MOVEMENT

- 3.3.13. The Proposed Development will be accessed from the east via an extension to the existing Omega South internal road known as Catalina Way, which connects to Skyline Drive (A5280) which then provides a direct link to Junction 8 of the M62. It is anticipated that the majority of Heavy Goods Vehicles (HGVs) will access the application site from Junction 8 via Skyline Drive, being the shortest route to the M62. Passenger cars will also be able to access in this manner but are also likely to access the application site from the south via Lingley Green Avenue and Omega Boulevard.
- 3.3.14. At the entrance to the Proposed Development a new roundabout will be constructed to provide direct access to Unit 1. A new internal south-north running road will provide access to the southern half of the Proposed Development subject to the outline planning permission.
- 3.3.15. A pedestrian and cycle route will be provided as part of the Proposed Development. It will run through the centre of the application site, south of the car parks associated with Unit 1, towards Booth's Wood and continue west through the landscape and ecology mitigation buffer area before connecting with the existing M62 overbridge(see **Figure 3.1**).

PROPOSED BUILDING HEIGHTS AND FLOORSPACE

- 3.3.16. The maximum building height for Unit 1 will be approximately 41 m to the ridge, however the unit will only be this high at the eastern extent. The remainder of the Unit will be 29.4 m in height.
- 3.3.17. The maximum building heights for Units 2 4 are not known given the outline nature of the proposals for this part of the application site. However, for the purposes of the EIA some basic assumptions on building heights (19m to ridge height) have been made. Building heights for these units will be dictated by future occupiers, whose requirements will vary depending upon the use and

nature of the operations involved. It is important to note that for the purposes of the EIA and the outline planning application it has been assumed that there are no development proposals for the Unit 1 expansion land at this stage.

- 3.3.18. The proposed floorspace figures for Unit 1 and the outline planning area have been defined above already. At this stage, a breakdown of units and corresponding floorspace proposed within the outline planning area has not been finalised and will be subject to change as the layout and design progresses.
- 3.3.19. **Figure 3.1** shows the potential for three additional units on the application site with a potential combined floorspace of up to up to 123,930 sq.m (1,333,9710 sq.ft).

PROPOSED SITE LEVELS AND EXCAVATION EXTENTS

- 3.3.20. In order to develop the application site, it will be necessary to excavate the majority of the application site in order to ensure the surface water drainage strategy functions, allow for existing water course diversions, the removal and diversion of existing services and achieve the required levels for the development platform. Therefore, there will be areas where additional material will be created (cut) and areas where additional material is required (fill). For the purposes of this ES, it has been assumed that the cut within the application site will be balanced by the fill and will be redistributed within the application site boundary and the majority of this material is suitable for this use.
- 3.3.21. It is assumed that all land within the development parcels within the application site will be subjected to excavation. It is also assumed that excavation will be to a maximum depth of 3 m below ground level (bgl) within the areas to be excavated. However, there are some notable exceptions where existing features are to be retained as outlined in the Vegetation Removal section. Appropriate protection zones around retained features (particularly hedgerows and ponds) will be implemented to ensure no detrimental effect to these features.
- 3.3.22. The "Green Wedge" and green corridors within the application site will be subject to some excavation / mounding as part of the implementation of the surface water drainage and ecological mitigation strategies, but it is assumed that any excavation / mounding will be situated away from existing trees as well as visually prominent and ecologically sensitive areas.

PROPOSED OPEN [AND/OR PUBLIC] SPACE

- 3.3.23. The Proposed Development also includes the provision/creation of two landscape and ecology mitigation buffer areas within the application site as detailed in Section 3.3.9.
- 3.3.24. Further details are provided in the Landscape Strategy section.

OPERATIONAL EMPLOYMENT

3.3.25. Once operational, the Proposed Development detailed application site is estimated to provide an 980 average annual Full Time Equivalent (FTE) employment opportunities. An estimated 2,679 gross annual FTE employment opportunities are likely to be associated with the outline application site.

EMBEDDED (PRIMARY) MITIGATION

3.3.26. **Table 3-1** below describes the proposed 'embedded' (environmental design) mitigation measures that are considered to be an inherent part of the Proposed Development i.e. the project design principles adopted to avoid or prevent adverse environmental effects. These embedded (primary)

mitigation measures should not be confused with additional (secondary and tertiary) mitigation proposed in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment, which are described within each technical chapter.

Environmental Factor to which the Embedded (Environmental Design) Mitigation Measure Relates	Embedded (Environmental Design) Mitigation Measure and Associated Benefit
Air quality	None identified
Noise and vibration	None identified
Cultural heritage	None identified
Biodiversity	None identified
Landscape	None identified
Water	 Surface water drainage design includes Sustainable Drainage Systems (SuDS) and follows the design principles of the SuDS Manual C753 and the St. Helens Council SuDS Design and Technical Guidance. Surface water discharge from the Proposed Development to existing watercourses restricted to the Qbar greenfield runoff rate by provision of attenuation for surface water runoff above this rate. Establishing finished floor level freeboard in the Proposed Development above existing ground levels and/ or design/flood water levels from any source, including from the drainage infrastructure. Inclusion of climate change guidance allowances within the design of the surface water drainage provision and diversion of the Whittle Brook channel associated in the area of the outline planning application site The proposed diversion of the Whittle Brook watercourse will follow the perimeter of the Application Site, diverted along the western and southern boundary. This route was selected based on the least environmental impact that would be Water Framework Directive compliant.
Transport	 A pedestrian / cycle link connecting the application site with the existing pedestrian bridge (south of Clock Face County Park) over the M62 to facilitate active travel between the application site and St. Helens A connection to the existing pedestrian / cycle facilities on Catalina Way. A connection to Omega Boulevard, running along the southern edge of the Omega Zone 7 development.
Major accidents and disasters	Comply with design standards, this will include designing to appropriate environmental parameters (flood, wind, lightning, ground stability) including climate change. Design standards apply to controls and systems and civil infrastructure;
Land and soils	None identified
Population and health	None identified

Table 3-1 - Embedded (environmental design) mitigation measures

Environmental Factor to which the Embedded (Environmental Design) Mitigation Measure Relates	Embedded (Environmental Design) Mitigation Measure and Associated Benefit
Climate	None identified

3.4 PROPOSED STRATEGIES

3.4.1. A number of strategies are being prepared to support the ES, as discussed in the paragraphs below.

PHASING STRATEGY

3.4.2. As a hybrid planning application, it is likely that those proposals subject to the detailed planning application (Unit 1) will be brought forward prior to those elements subject to the outline planning permission. To allow for a reasonable worst case within the ES, all assessments have assumed Unit 1 will be operational by the end of 2021. The outline application elements will depend on market conditions but for the purposes of this ES it has been assumed they will be operational by the end of 2024. Phasing will also be market driven but it is anticipated that the outline application elements will be built in the order of Unit 2, 3 then 4 to make the most efficient use of infrastructure.

SURFACE WATER DRAINAGE STRATEGY

- 3.4.3. The general principles applied to the surface water drainage strategy for the Proposed Development will be to treat, store and control surface water runoff through the use of suitable Sustainable Drainage Systems (SuDS) in accordance with the SuDS management train, National Planning Policy Framework (NPPF) (Ref. 3.2) and the adopted National SuDS standards and Construction Industry Research and Information Association (CIRIA) guidance (Ref 3.3). As such, the general surface water drainage strategy for the Proposed Development will ensure that any surface water flows replicate that of the current scenario and the proposed surface water drainage will reflect the existing drainage regime.
- 3.4.4. Surface water balancing facilities, including detention basins and swales, will be provided to ensure that the surface water flows across the developable areas can be attenuated within the application site and the required run-off rates can be achieved. Each development parcel will be served by associated off-plot detention basins that will store and treat surface water run-off from impermeable areas. Swales will be provided along the key spine roads through the application site . The proposed attenuation features will provide for all surface water run-off on-site for storm events up to a 1 in 100 year return period plus a 30% allowance for climate change. The catchment areas on which the detention basins and swales have been sized to replicate the existing overland flow routes. Where practical the detention basins and swales will be connected to ditches / watercourses which will dispose of the surface water run-off off the application site.
- 3.4.5. Green corridors and multi-functional open-space areas will be utilised throughout the Proposed Development to accommodate the SuDS features. An integrated design approach has been adopted to enable the function of these areas to be combined with other uses such as public amenity space and pedestrian routes. Any watercourses which are required to be diverted due the implementation of the Proposed Development will be diverted by open channel methods to ensure that the current land drainage regime is maintained.

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3.4.6. Highways drains serving the access roads through the application site will generally outfall into the public surface water sewers which are situated on the boundary of the application site. The drains will be oversized so to accommodate surface water run-off for storm events up to and including 1 in 100 year event plus 30% climate change.

FOUL WATER DRAINAGE STRATEGY

- 3.4.7. A new foul water drainage system will be installed to serve the Proposed Development which will be offered for adoption by UU. The foul drainage will be designed and constructed in accordance with Sewers for Adoption 7th Edition OR Water UK Sewers for Adoption 8th Edition (Ref. 3.4).
- 3.4.8. It is anticipated that the proposed foul drainage will connect to the existing sewers adjacent to the application site boundary and that the network be achieved by a gravity system alone. However, depending on detailed design and building orientation on-plot foul pumping systems may be required.
- 3.4.9. To permit access, sewers for adoption will be located within highways or public open spaces. Sewers which are located in private areas may be offered for adoption provided they are accessible 24 hours a day and subject to provision of the minimum applicable easement. It is assumed that any foul / surface connections would be appropriately designed and implemented to avoid misconnection and a site audit would be undertaken prior to operation.

LANDSCAPE STRATEGY

3.4.10. Provision of landscaping and open space is a principal characteristic of the Proposed Development, working with the existing vegetation and topography where possible. Within the application site, the landscape areas previously identified, will provide for amenity use and also allow for extensive ecological mitigation and attenuation of surface water run-off. The overall landscape design of has been influenced by the wider Landscape Strategy already adopted at Omega but directly responds to the landscape requirements and opportunities of the application site. Full details can be found in **Chapter 10: Landscape and Visual** of the ES.

LIGHTING STRATEGY

- 3.4.11. Due to the nature of the Proposed Development, it is expected that the lighting to be installed on the application site will be a combination of on-plot lighting for the buildings and their associated car parking and service yard areas and off-plot highways and street lighting along the proposed access roads and junctions. Full details of the lighting proposals for Unit 1 are provided as part of the application and it is assumed that comprehensive lighting strategies for the remaining units will be prepared by a specialist lighting contractor at the detailed design stage and agreed with St. Helens. It is assumed that any lighting will be designed to comply with guidance contained within *British Standard (BS) 5489-1: 2013 Code of Practice for the Design of Road Lighting. Lighting of Roads and Public Amenity Areas* (Ref. 3.5) with the appropriate level for the proposed use of each area taken into account.
- 3.4.12. It is assumed that installations with full cut-off will be installed along the edge of development parcels and roads adjacent to water courses / green corridors / spaces to minimise light spill and glare to these sensitive areas. It is also assumed that any ecologically sensitive areas to be created as part of the development i.e. the 'Green Wedge' and green corridors along the boundaries of the application site will remain unlit.

WASTE MANAGEMENT STRATEGY

3.4.13. It is assumed that the Proposed Development will include appropriate waste storage facilities for both residential and commercial uses which will allow for the storage of waste prior to collection.

3.5 CONSTRUCTION PROPOSALS

PROGRAMME

3.5.1. For Unit 1 it is assumed that construction will begin in September 2020, with a completion / occupation target of the end of 2021. Timescales and programme for the remainder of the application site are unknown at this stage and will be subject to market demand.

PROPOSED KEY CONSTRUCTION ACTIVITIES

3.5.2. Principal Contractors have not yet been appointed for the Proposed Development therefore, exact details of the construction methods to be utilised on-site are not known at this time. However, in order to determine any potentially significant environmental effects of the construction phase within the ES, a number of appropriate assumptions have been made in relation to construction methods on-site. These are noted where appropriate below.

CONSTRUCTION EMPLOYMENT

3.5.3. Applying an average gross output per construction industry employee to the estimated total construction cost, it is estimated that on average there will likely be approximately 1,002 gross construction workers on-site per year, totalling approximately 1,126 net construction phase jobs once displacement and indirect and induced effects are taken into account.

CONSTRUCTION ACCESS / HAULAGE ROUTES, PARKING AND TRAFFIC

- 3.5.4. The selection of construction vehicles and the numbers of vehicular trips which are required will depend on the size and number of vehicles operated by the Principal Contractors and the scale of the works involved. However, for the purposes of the ES it is assumed that a maximum of 50 movements of HGVs will occur per day on the strategic and local road network during the construction phase. In addition, vehicle trips by construction workers alongside the delivery of specialist equipment by low-loaders are also anticipated.
- 3.5.5. When considering possible size restrictions for vehicles which would be in daily use, the key vehicles would be the delivery of bulky items by articulated lorry. Specialised items such as low-loaders to deliver construction plant and other machinery would need to be considered on an individual basis and would be dependent on both the form of construction to be adopted and the programme.
- 3.5.6. Construction traffic is assumed to access the application site via Junction 8 of the M62 motorway, Skyline Drive and Catalina Way. It has been assumed that the majority of construction deliveries and collections to the application site will occur outside of the prevailing traffic peak periods on weekdays.
- 3.5.7. Appropriate controls will be implemented to ensure the safety of other road users and to protect the environment including:
 - Appropriate signing of the delivery route to ensure vehicles use the approved route to and from the application site;

- Warning signs where appropriate in the vicinity of the application site entrance(s) both for vehicles and pedestrians;
- Co-ordination of delivery times to ensure that vehicles are not required to wait on the public highway before entering the application site;
- Layout of the application site to allow adequate space for goods vehicle manoeuvring within the application site;
- Temporary traffic management for short periods when delivery of oversized loads may cause obstruction to the public highway;
- Design of the application site access to ensure that vehicles have appropriate visibility upon leaving the application site; and
- Wheel washing facilities for vehicles leaving the application site.
- 3.5.8. During construction restrictions may be required for pedestrians in the vicinity of the application site in order to ensure their safety. When such restrictions are in place and where relevant alternatives will be offered to maintain access. Current routes together with the improvements associated with the Proposed Development will be opened as soon as possible.

CONSTRUCTION COMPOUNDS

3.5.9. The location of the Principal Contractors compounds during the construction phase has not been identified at this stage and will be largely dependent on the appointed Principal Contractors and phase of the development. As such, to ensure a fully robust assessment, it has been assumed that the construction compound(s) will be located at the closest point to the sensitive receptor (i.e. the worst-case locations) for each technical assessment within the ES (technical chapters 6 - 16) during this phase.

GROUND REMEDIATION WORKS

3.5.10. A detailed intrusive Ground Investigation is currently being undertaken with completion expected at the end of December 2019. The Ground Investigation will target the localised potentially infilled ponds and assess the suitability of the soil across the wider application site for re-use within the Proposed Development. Upon completion of the Ground Investigation, an interpretive report will be completed which will highlight any exceedances of the prescribed Generic Acceptance Criteria and outline risks to human health or controlled waters. Should exceedances be identified, a remediation strategy and subsequent validation report will be completed and submitted to the local regulatory authority (St. Helens Council).

TEMPORARY DRAINAGE SOLUTION

- 3.5.11. It is assumed that prior to commencement of works a proposed temporary drainage strategy will be implemented to mitigate both flood risks and sediment loading. The temporary drainage strategy may be phased as necessary during the construction phase. The proposed temporary drainage strategy for each phase of the Proposed Development will be developed during the detailed design stage for each corresponding phase.
- 3.5.12. It is assumed that the temporary drainage strategy will include measures to remove silt, sediment and debris and to attenuate surface water runoff prior to controlled discharge to the existing local drain network. These measures will include implementation of a SuDS management train for surface water drainage. This will include temporary settlement and storage ponds or where appropriate may utilise the permanent drainage components constructed as part of the permanent works. Where permanent drainage components are used during this phase, all silt and debris build-up is assumed

to be removed and the permanent components fully reinstated on completion of construction activities.

3.5.13. It is assumed that surface water will discharge into the detention basins / swales and then into existing watercourses on-site at the existing run-off rates and any increase in surface water run- off above the pre-development volumes will be attenuated on-site.

VEGETATION REMOVAL

3.5.14. Total woodland/tree loss will be 56,339 m², with total woodland/tree creation 80,639 m² resulting in a net increase in additional woodland/tree cover of 24,300 m². Total hedgerow loss will be 534 lin.m, with total hedgerow creation 1,708 lin.m resulting in a net increase in additional hedgerow creation of 1,174 lin.m.

CRANES

3.5.15. The use of cranes will be reliant on the appointed Principal Contractors on-site. However, it is likely that cranes will be utilised in the construction of the Proposed Development. The type and size of any cranes utilised in the construction phase will be determined by the appointed Principal Contractors.

CONSTRUCTION OF BUILDINGS / HARDSTANDING AND INSTALLATION OF PLANT / EQUIPMENT

3.5.16. The construction phase of the Proposed Development will involve a variety of different plant and equipment to undertake relevant works. The exact plant and equipment to be utilised throughout the construction phase will be sourced by the appointed Principal Contractors. The type and number of plant is likely to be variable over the construction period and is likely to be dependent on the nature of the construction activity. However, or the purposes of the ES, **Table 3-2** outlines the potential type of plant to be used during this phase, the number of plant and the assumed percentage on-time.

Stage	Plant Type	No. of Plant	Assumed Percentage on- time
Earthworks	Diesel Generator	1	90
	Tracked Excavator	2	50
	Dump Truck	2	40
	Lorry pulling up	1	10
	Lorry unloading	1	10
Road Works	Asphalt Spreader with support lorry	1	60
	Road Roller	1	30
	Tracked Excavator	1	50
Building Foundation Works	Excavator	1	50

Table 3-2 - Assumed type of plant to be used in construction phase

Stage	Plant Type	No. of Plant	Assumed Percentage on- time
•	Truck mixer with pump	1	30
	Compressor	1	60
	Poker Vibrator	2	30
	Dump Truck	1	40
	Piling rig	1	30
Building Construction	Hammering	2	20
	Lorry pulling up	1	10
	Lorry unloading	1	10
	Dump Truck	1	40
	Compressor	1	75
	Forklift Truck	1	60
	Scaffolding	1	10

CONSTRUCTION WASTE

3.5.17. It is likely that waste will be generated during the construction phase for example, packaging from deliveries and off-cuts of materials that are surplus to requirements. To maintain sustainability, wherever possible, the Principal Contractors will seek to minimise waste and reuse materials wherever possible on-site. Where reuse is not possible disposal of the material off-site to a suitable licenses landfill site will be undertaken.

KEY CONSTRUCTION PRACTICES

- 3.5.18. A Construction Environmental Management Plan (CEMP) will be prepared for the Proposed Development (or for each phase of the proposals). The CEMP will detail the environmental controls / protection measures and safety procedures that would be adopted during the construction of the Proposed Development. Whereby providing a tool to ensure the successful management of the likely environmental effects as a result of construction activities.
- 3.5.19. All construction works would be undertaken in accordance with the EA's Pollution Prevention Guidance Notes and CIRIA Guidance 'C532 – Control of Pollution from Construction Activities' (Ref. 3.6).
- 3.5.20. Measures to provide ecological protection across the application site will be prepared prior the commencement of each phase of the Proposed Development. These measures will include identification of the features of ecological value and detail protection measures (physical measures (exclusion zones) and sensitive working practices (including restriction of construction activities in ecologically sensitive areas).

3.6 **REFERENCES**

- Ref. 3.1: Town and Country Planning (Use Classes) (England) Order 1987 (as amended 2015) Statutory Instrument 2015 No. 597
- Ref. 3.2: Ministry of Housing, Communities & Local Government National Planning Policy Framework (2019)
- Ref. 3.3: Construction Industry Research and Information Association (CIRIA) The SuDS Manual (C753) (2015)
- Ref. 3.4: WRc Sewers for Adoption 7th Edition (2013) or Water UK Sewers for Adoption 8th Edition (2019)?
- Ref. 3.5: BS589-1: 2013 Code of Practice for the Design of Road Lighting. Lighting of Roads and Public Amenity Areas
- Ref. 3.6: Construction Industry Research and Information Association (CIRIA) C532 Control of Pollution from Construction Activities

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