Construction Environmental Management Plan

for the

Project Horizon

Alton Towers Resort

Report Prepared by Paul Crosbie

Position: Principal Designer

Date: 4th January 2023

1 Introduction

This Construction and Environmental Management Plan (CEMP) has been prepared by PCA Safety Limited, the projects appointed Principal Designer with inputs from the project team as required. .

It provides details of the CEMP for the proposed Horizon project in the "Sui Generis " area of Alton Towers Resort Alton Staffordshire ST 10 4DB.

2 Provisional Construction Traffic Management Plan

During the initial site preparation, and construction phase of the project, materials, equipment, and personnel will require movement to and from the site. This CEMP describes how these movements will be managed to protect the ecology and habitat.

The traffic numbers quoted within the plan are based upon the experience and knowledge of previous developments within the Alton Towers Resort site.

The construction period is projected to last approximately 78 weeks.

3 Primary Site Entrance off Farley Lane

The existing main park entrance off Farley Lane will be used in compliance with current arrangements.

The Principal Contractor will utilise the existing service vehicle access road designed for large vehicles off Farley Lane to access the site.

The Principal Contractor will ensure the upkeep of the entrance and verges affected at the entrance. They will ensure that all vehicles accessing, and egressing site are of the correct dimensions to safely access/egress the public highway.

4. Delivery Management and Routing

The onsite Principal Contractor Construction Manager will have full responsibility for the coordination and management of deliveries to and from site. The manager will ensure the safety of all on site personnel, the occupants of neighbouring properties, road traffic users and the public.

The appointed manager's role will also include advising delivery drivers of the most appropriate routes to and from site, the most suitable times of deliveries and of any local restrictions on vehicle heights and widths and proposed events etc.

Vehicle movements between school hours will be so far as practicably kept to a minimum. All traffic will comply with local rules and traffic conditions.

Deliveries will be outside the Alton Towers operational times as per published web page below:

https://www.altontowers.com/plan-your-visit/before-you-visit/opening-times/

5. Deliveries to site

Deliveries of plant, materials and equipment will be made by 20-30T vehicles and smaller rigid vehicles. To assist with offloading deliveries an on-site a Telescopic handler will be used as well as delivery vehicles having a Hiab Crane attachment. Deliveries will be organised and planned with liaison with the Principal Contractor.

Off-loading will be within the planned site boundaries as indicated on the application drawing ATPH-SA-XX-XX-DR-A-0101_Location Plan

Table 1 & 2 show the estimated vehicle movements on site. These values are based upon the information from previous similar developments on site.

The hours of deliveries to the site of the development will be restricted to 08.00 to 1800 hours on Monday to Friday, 08.00 to 1300 hours on Saturday, with no work at any other time including Sundays and Public Holidays

Table 1 Delivery of Heavy machinery/ equipment

Description	**Vehicle type**	**Estimated number of Vehicles**
Temporary storage containers	Rigid 30 tonne wagons to deliver and remove	4 to remain on site until completion
Excavator/ Telehandler / MEWP	Articulated low loader	2 to remain on site until completion
Cranage	Self propelled	1 no to remain on site for 6-8 week period
Miscellaneous plant	Fixed 5 Tonne dumper	2-3 to remain on site until completion

Table 2 Delivery of materials and equipment to and from site

Description	**Vehicle type**	**Estimated number of Vehicles**
General waste from site	25 Tonnes 4 axle rigid	45 per week over the first 15 weeks of project
Aggregates for construction work	30 tonnes max 4 axle rigid	15 per week from week 8 to week 25 of the project
Concrete deliveries	30 tonnes max 4 axle rigid	15 in total
General delivery vehicles	18 tonnes max	Max 2 per week during project build
Building steel work	32 tonne articulated wagon	5 per week from week 35 - 60
Site personnel traffic- Site preparation & construction	Vans <2Tonne and cars	10 per day for the duration of the project

Table 1 & 2 sets out the estimated deliveries, specifications and the estimated vehicle movements to and from site. These values are based upon the information from previous similar developments on site.

Where practicable all materials, plant and equipment will be sourced from local suppliers to minimise the impact upon the highway network

Avoidance of deliveries off and on to site between 0800- 0900 and 1630- 1800 shall be implemented where possible

A Contractors deliver schedules will be in place managed daily by the principal contractor

6 Construction methodology and sequence

The site will be fully fenced off to prevent unauthorised access as per the requirement of the Construction Design and Management (CDM) regs 2015. Reg 17 and 18 See Appendix 2 site CDM boundary plan and access see site boundary ATPH-SA-XX-XX-DR-A-0103 - Proposed Site Plan

Suitable safety signage as per the Safety Signals Regulations will posted at the Construction site boundary.

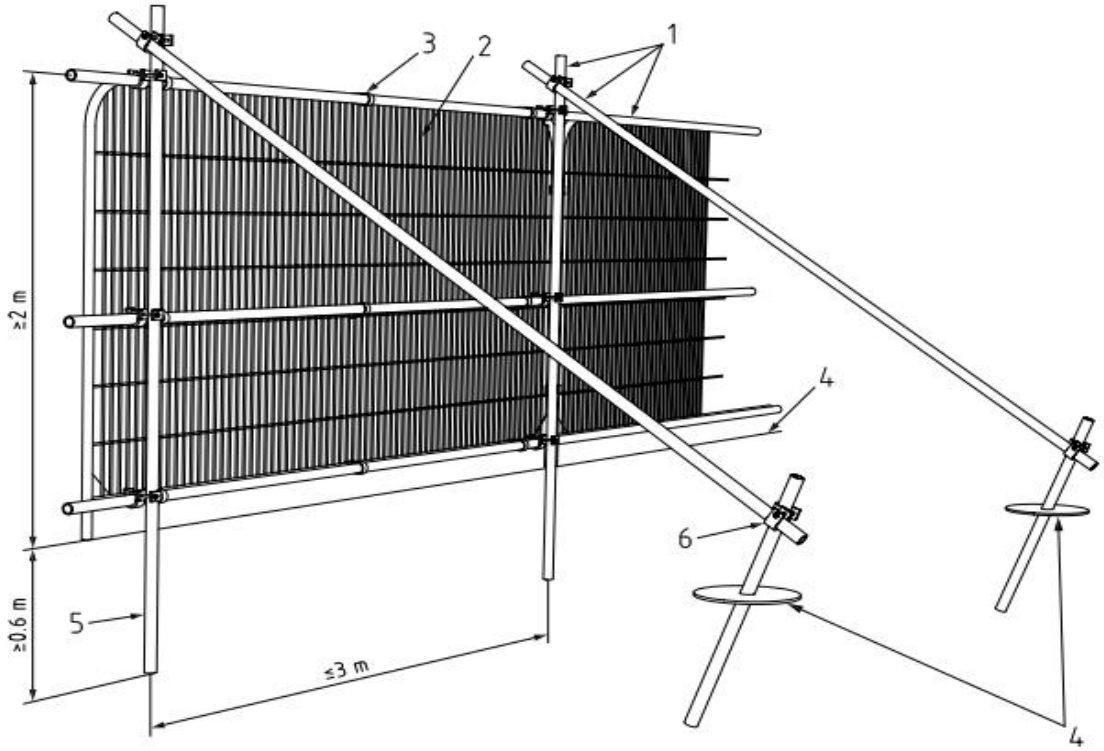
The site will be surveyed by the principal contractor and all access routes, services and protected ecology areas will be marked out and protected before any work progresses.

6.1 Tree/ root protection

All trees noted on the site plan will be identified as part of the site survey. Fencing will be as per BS.5837/2012 and Tree Schedule Alton Towers Horizon, plan THL-1063 Alton Towers Horizon complied by Tree Heritage Ltd

This will be in line with Constraints Plan ATPH-SA-XX-XX-DR-A-0103_Site Constraints or any plan as updated and approved with the Council.

The tree protection areas are noted on drawing which forms part of the application



Key

1 Standard scaffold poles
2 Heavy gauge 2 m tall galvanized tube and welded mesh infill panels
3 Panels secured to uprights and cross-members with wire ties
4 Ground level
5 Uprights driven into the ground until secure (minimum depth 0.6 m)
6 Standard scaffold clamps

Warning signs will be posted around the fencing "CONSTRUCTION EXCLUSION ZONE – NO ACCESS".

All trees to be protected will be identified by the tree report carried out by the nominated arboriculturist and in consultation with the local authority tree protection officer

No machine excavation will be carried out within the RPA zone and any drainage installation within the RPA will be by hand dug in accordance with BS.5837/2012 with direct liaison with the Tree protection officer on site.

6.2 Protection Zones (including tree protection areas)

A protection zone will be provided around the areas identified in the ecological impact assessment and tree protection zone information

These protection zones will be set up at the start of works and will help prevent the spread of invasive weed species, any potential water pollution events, and impacts on nesting bird and reptile habitats.

Fencing (Heras type) panels will be erected off set from the biodiversity protection zones 1m within the development area to form an exclusion zone .The location of the fencing will be agreed on site by the project ecologist, with any works required within the protection zones carried out under ecological supervision.

The site manager will ensure the fencing remains in situ throughout the works and no plant will be located or works will take place within the exclusion zone, without prior approval by the project ecologist.

6.3 Site works

The principal contractor will form all access routes within the site and work areas by stripping back soils, top and sub (storing them for reuse on site).

Any trees requiring removal will be surveyed by the arboriculturist and /or ecologist as required to ensure they are able to be removed. Specialist tree surgeons will fell the timbers and build habitat piles, within the retained woodland area which will provide a range of habitats for invertebrates and other fauna.

An access road will be from the existing service road and will eventually form the footprint of the proposed building . ATPH-SA-XX-XX-DR-A-0102_Site Plan

Cut off ditches will be formed around the excavation areas to divert any surface run off into setting holding areas, slit traps will be used to prevent any runoff, silt captured will be reused within the cut and fill areas.

Any roadway will be made up of a geotextile membrane and clean compacted local stone to allow access by road vehicles.

The site boundary fencing and temporary access routes will be removed on completion of the works.

Soil strip will be by dumper and excavator with soils being spread in layers. The dumper will travel on stripped areas only to minimise compaction of the soil. Tipping will be a retreat operation to minimise running of dumpers over the tipped material. Recovery of the material will be carried out in reverse to minimise compaction of the soil.

All open excavations will be ramped or closed off to prevent accidental falling in of persons and animals.

The only excavation works are for the installation of foundations and subbase excavation for hard surface installation. All excavation work will be carried out using hydraulic operated excavators. Rubber tyred dumpers will transport spoil and fill within the site boundary.

6.4 Contaminated land

A preliminary risk assessment accompanies the planning application to consider the risks from contamination ground. From the desk top study it has been found that no contamination is present

If unexpected contamination is found during the works, the works will be halted in the area of suspected contamination and a full investigation and sample analysis undertaken.

This will be reported in writing immediately to the local planning authority.

The investigation and risk assessment will be undertaken by competent persons and shall assess any contamination on the site whether it originates on the site.

Where remediation is necessary, a remediation scheme, together with a timetable for its implementation will be submitted to the Local Planning Authority for approval.

6.5 Offsite traffic management

Temporary “Construction site access warning signage will be displayed at the existing entrance during high vehicle movement periods. All signage will be in accordance with Chapter 8 Traffic Signs manual, the Construction Design and Management Regulations 2015 and will be provided and maintained for the duration of the construction phase on all approaches to the site were required.

All parking will be within the CDM site boundary there will be dedicated area for the construction team; access will be via the back of house internal service road.

All plant, machinery and materials will be stored in the dedicated laydown storage area within the CDM area.

7 Site Security

The site will be secured by the existing boundary fencing of the Alton Towers resort. Additional Heras and solid hoarding security fencing will be erected at the site boundaries within the park area to delineate the construction site from the remaining Alton Towers Resort. Warning Notices and Company information will be displayed at the site entrance. There is current CCTV present which is monitored 24/7 by the Alton Towers resort security.

8 Complaint contacts

The Principal Contractors details for the person responsible for any problems for the site will be displayed on the site boundary so that local residents are able to contact the principal contractor to raise any issues that they may have and report complaints. The contractors will keep a record of all such complaints and respond to them as soon as possible.

The log of complaints and action taken should be made available to the local authority on request.

9. Local Ecology

- Birds & Bats:

No adverse impacts on bats or their habitat are anticipated as a result of the development. All ecology protective measures will be in compliance with an ecological impact assessment and tree protection zone information findings and recommendations.

Impacts on nesting birds will be avoided by minimising the site clearance work and similar operations outside of the bird breeding season (which is March-August). Where this is not possible any trees clearance will be observed by a qualified ecologist and if any nests are identified they will not be disturbed.

A confirmed bat roost has been recorded within a portable retail unit located within the proposed development area. Damage to this must be avoided, so it will be moved outside of the development area at the start of site clearance. This must be done during the winter months (Nov-Feb inclusive). The unit will be moved approximately 25m to the northwest of its current location into an area with suitable habitat connectivity. A Method Statement will be agreed with the ecologist prior to works and implemented under ecological supervision.

- Protection of the local water courses:

The Principal Contractor will ensure that no solid or liquid waste products or contaminants enter the water courses.
All construction operations handling of building materials and mixing of concrete/mortar will be undertaken in seepage proof containers.
The construction design, hardstanding and building foundations will include groundwater seepage prevention. Ref Drainage Strategy.

A discharge monitoring and maintenance regime will be under the supervision of the principal contractor.
It is proposed that the development will have self-contained drainage containment systems installed.
The above strategy should ensure that the local water courses and the surrounding environment is protected from pollutants as a direct result of the project.
Ecological Impact Assessment to be supplied for further measures

10. Japanese knotweed

A japanese knot weed survey has been scheduled to be undertaken.

Should any be found a management plan to avoid the spread of Japanese knotweed during works will be prepared in accordance with Environment Agency guidelines provided in Managing Japanese knotweed on development sites - the knotweed code of practice (Environment Agency, 2006).

11 Environmental Strategy - The Control of Dust and Emissions from Site Preparation and Construction

Control measures to control dust for the project also covers other emissions to air, including fumes and smoke. Prior to starting any works which would create excessive dust, site management will notify neighbours as to what activities we plan to do and for how long.

The basic precautions that will be taken to minimize dust generated on the site include covering waste skips, water suppression, segregation and exclusion using impermeable barriers, and avoidance of allowing equipment to run dry whilst engaged in operation. All vehicles carrying waste will be sheeted.

Haul roads will initially be hardcore/crushed material construction and can be sprayed to minimize dust. Once surface bound, they will be swept on a regular basis, the Site Manager will decide the necessary frequency based on the conditions on site. This will allow delivery trucks to be kept relatively clean and significantly reduce the likelihood of dust on roads outside the site.

Vehicle wheel washing facilities will be located at the construction site entrance

Cleaning of surfaced site roads will be carried out weekly by a contracted road sweeper, however frequency will increase or decrease as the manager feels necessary. This would include site entrances and the immediate highway. It is important to recognise that this needs to be monitored consistently throughout the contract, in light of site operations and weather conditions and not just in the early stages.

The Site Manager must visually monitor dust production at regular intervals during the day and record their findings. Records will be kept on file in the site office and must be made available to the EHO upon request.

Materials will be stored on site. These will include reclaimed materials, and this will be closely monitored to reduce the potential for airborne dust. Material intended for the filling of the low area

will be placed as soon as practical. In prolonged periods of dry weather, measures will be taken to keep the material in a damp condition by water spraying.

Dust suppression can be implemented on small plant when operations are being carried out adjacent to existing properties. Cutting and grinding on site should be kept to a minimum but where necessary; it should be carried out using equipment fitted with silencers and water suppression devices.

We will minimise creation of dust by Elimination – Substitution – Isolation – Control measures. This will be done by shutting plant down when not in use to eliminate the problem. If excessive dust is still a problem, then the problem will be isolated by moving plant to another area of site to isolate the problem away from neighbours. If the plant cannot be moved anywhere else, we will then control by erecting screens or enclosures.

In the event of a complaint however received, the Site Manager will be responsible for following the complaint through to resolution and initiating any necessary enforcement or corrective action. Remedial action will then be taken to reduce levels and the Site Manager will check and verify that the corrective action has been successful in reducing dust production.

11.1 Local Air Pollution Prevention and Control (LAPPC)

These regulations apply to smaller industrial activities, known as Part B Installations, such as concrete batching or concrete crushing. Local authorities, as the regulators, are responsible for controlling emissions from these premises and set conditions in permits they issue to achieve this. Conditions are based on Best Available Techniques (BAT), which require that the cost of applying a technique is not excessive in relation to the environmental protection it provides. The Secretary of State for Environment, Food and Rural Affairs has produced Process Guidance Notes, which form the statutory guidance on what constitutes BAT for each regulated process. If the regulator believes the operator has contravened, or is likely to contravene any permit conditions, enforcement action can be taken.

11.2 Site preparation activities dust and emissions control measures.

Potential dust hazards can be assessed according to BS 6187:2011 Code of Practice for full and partial demolition, which includes the initial stages of the project development and management from demolition techniques to re-using or recycling materials. All waste will be recycled and disposed of in compliance with current statutory duties and current best practice.

12. Asbestos

There is no asbestos expected in the site vicinity therefore the site will not be subject to a survey in compliance with the Control of Asbestos Regulations 2012 and in compliance with HSG 264 The Survey Guide.

- If appropriate, Notify the Health and Safety Executive of any work
- Always employ competent and licensed contractors
- Clearly identify the location of asbestos containing materials before starting work.

- put in place procedures to sample and analyses suspect materials
- carry out independent air sampling to ensure standards are met
- dispose of asbestos-containing materials to licensed waste sites according to HSE guidelines before the demolition company is given access.

13. Fire Safety

There will be NO waste burnt on site. A specific site Fire Risk assessment will be compiled for the undertaking of all construction related activities.

14. Noise Control

We will always employ the Best Practicable Means.

The other method we use to control noise from construction sites is to require that all contractors use the 'best practical means' to minimise noise from their activities. This can include matters ranging from the prohibition of the use of radios on site to the proper maintenance of plant and equipment. It can also include matters such as the choice of appropriate plant for a particular task or putting up noise barriers or screens.

Poorly maintained plant and equipment can give rise to excessive noise and the failure to use the built-in noise control shielding on plant can cause problems.

We encourage the use of mains powered electrical equipment (rather than using generators) and hydraulic breaking or bursting techniques are preferable to impact breaking methods

The choice of equipment for a particular task is important in noise reduction. For example, bored piling is usually a lot less disturbing than hammered piling. We therefore insist on the use of bored piles whenever possible. However, sometimes it is necessary to use hammered piling techniques for engineering reasons. These operations will be minimised, and residents advised of any short term noisy construction periods.

So far as is reasonably practicable all crushers and breakers will be sited upon crushed or soft materials to reduce the effects of vibration.

15. Plant and Machinery

The rating level (LAeq,T) from any plant and equipment associated with the development, when operating simultaneously, shall not exceed the background noise level (LA90,T) at any time when measured at the nearest noise sensitive premises at the quietest time that the equipment would be operating/in use. Noise measurements and assessments will be compliant with BS 4142:2014 "Rating industrial noise affecting mixed residential and industrial areas".

All plant will be stored in the site compound when not in use. Engines will not be left running when not in use, noise mufflers will be used on plant and use of site radios will not be permitted. We will make sure that unnecessary metallic impact noise is avoided from dropping scaffolding poles,

placement of roading plates, moving metal fencing and the clanking of chains on crane hoists. The machines we will use will have been maintained regularly. Simple maintenance can reduce noise levels by as much as 50 per cent.

We will position static plant and equipment as far as possible away from sensitive boundaries, as work allows. A distance of four times further away lowers the noise by 12 dBA. A reduction of 10 dBA will sound half as loud. In some cases, quiet plant and machines are available which are specifically designed to produce less noise, these will be used where possible. Examples are muffled breakers (the noise of a typical silenced breaker can be reduced by 16 dBA if a purpose-made muffler is fitted) and silenced diesel generators and compressors (some units are up to 15 dBA quieter). Generally, electrically powered equipment such as chain saws and cranes are noticeably quieter than diesel-powered equipment and hydraulically powered equipment is quieter than pneumatic power.

Where possible the following measures will be taken:

- Cutting metal using gas cutters rather than using grinding methods.
- When replacing exhaust and intake mufflers, quieter options will be requested.

Specified plant and equipment such as excavators can also operate at very different noise levels.

- Machinery covers and panels will be closed and well-fitted.
- Bolts and fasteners should be done up tightly to avoid rattles.

Overpowered or under powered equipment will be avoided.

15.1 Saw Cutting of Pavers and Pavement Slabs

A cutting station should be established with the saw enclosed in an acoustic enclosure. A simple screen is unlikely to be effective in residential streets due to reflected noise effects. A water supply should always be made available, and the saw blade changed regularly to avoid an annoying high pitched “whining” noise from developing. For any saw cutting choose a saw blade with the greatest number of teeth and of the smallest width. Choose a blade with gullets as small as possible.

15.2 Audible Reversing Signals

These signals are very penetrating by design and may be turned off, or the tone changed in some circumstances. This will be assessed and liaison with the company safety advisor must be undertaken to ensure that site safety requirements are maintained.

CCTV cameras and radar assisted reversing aids will be employed , reversing will be in a segregated area with no pedestrians

15.3 Cranes

Cranes will be utilised within the construction site boundary to erect the attraction building

16. Waste Management

All waste must be segregated disposed of in the respective waste skips, to allow for recycling or disposal at a Licensed Off-site facility.

The management of all waste materials generated on site will be demonstrated through a

Site Waste Management Plan

The site waste management plan (SWMP) will include the following

1. Details of the types of wastes/materials likely to arise during the construction phase;
2. Storing and reusing earthwork materials to negate the export and import of such materials. All soils should be handled and stored carefully to minimise the potential for damage to the soils structure.
3. Reduction of site generated waste through waste minimisation and recycling initiatives, including the source segregation or re-useable and recyclable materials.
4. Details of waste handling procedures including details of appropriately licensed waste contractors.
5. Assignment of responsibility for the implementation of the waste management plan.
6. Details of method for maintaining a record of all rising, movements and treatment of wastes arising during the construction phase of the redevelopment.
7. There will be no unauthorised disposal, recovery or movement of waste, no burning of wastes on site and no wastes buried on site.

A recycling area within the site will be set up to segregate and separate recyclable materials

17 Conclusion

It is considered that with the environmental protection described above in place, the biodiversity and nature conservation value of the site will be protected and impacts on residents minimised.

The principal contractor will accept, that if circumstances change which result in changes to the proposed project construction and environmental management plan, they and the Alton Towers Park resort will enter discussions of the proposed changes with the local authority and ensure that the necessary permissions are granted to allow for those changes to take place.

Name: Paul Crosbie

Principal Designer
Client: Alton Towers /Merlin Attractions Operations Limited