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INTRODUCTION

- 13.1 This Chapter provides a summary of the mitigation measures proposed at the Site by each technical discipline.

TRAFFIC

Safety

- 13.2 In view of the magnitude in the change in traffic and in combination with the fact that the highway network would continue to operate at broadly the same level compared to the baseline scenario, it is concluded that there would be no material or significant worsening of highway safety risks as a result of the proposed development.
- 13.3 Consequently, the proposed development is considered to be acceptable in the context of highway safety and no mitigation measures are considered necessary.

Traffic Increase

- 13.4 The relative increase in traffic has been considered in the context of IEA Guidance and it has been concluded that any change is immaterial in the context of the environmental effects of transport, and that this is particularly the case given that there are no sensitive receptors within the study area.

Accidents

- 13.5 A review of accidents was undertaken for a five-year study period which confirmed no unacceptable safety risk on any part of the highway network.

Capacity

- 13.6 Capacity analyses were undertaken of the Hamper's Lane / A283-Storrington Road junction and this indicates that the junction will operate with around 90% reserve capacity in the 2019 baseline scenario, and that this would broadly remain the same with the development in place.

Traffic Mitigation Summary

- 13.7 It is considered therefore that the proposed development could be adequately accommodated without any material detriment to the operation of the highway network or the environment and therefore no mitigation measures are considered necessary.

AIR QUALITY

- 13.8 The dust impact assessment has identified the need for additional mitigation measures to reduce the risk of impact at the identified receptors all of which

are located within 100m of the site boundary. Due to the assessment using the entire application area as a potential dust source, the percentage of winds which would blow from the direction of Washington Pit towards each respective receptor are significantly higher than if the assessment used the areas of potentially dusty activities alone. Due to the lack of knowledge of these activities over the 5 year period a worst case scenario has therefore been undertaken.

13.9 Mitigation measures would therefore be required on site to reduce the risk of the generation of fugitive dust, or to minimise the transfer of airborne dust beyond the site boundary.

13.10 As the site is currently operational as an active sand quarry, a number of dust mitigation measures employed on site would continue to be employed during the proposed restoration works.

13.11 These would include the following:

- minimise drop heights during unloading activities;
- use of water sprays on material as and when required;
- temporary storage mounds of soil to be a maximum of 2m in height;
- soil stripping and replacement to be undertaken in strips to minimise the area of disturbed / exposed soils;
- no heavy wheeled machinery / plant to run over in-situ. undisturbed or replaced soils;
- seeding / planting of restored areas as soon as practicable;
- routine inspection and maintenance of plant dust suppression equipment;
- limit the construction of stockpiles during dry and windy weather;
- locate stockpiles away from internal haulage routes;
- locate stockpiles away from site boundary and sensitive receptors where practicable;
- avoidance of prolonged storage of materials onsite prior to use / disposal;
- aggregation of stockpiles where possible to avoid the generation of many, smaller stockpiles;
- seeding of all long-term stockpiles of soils or overburden;
- location of mobile screening plant in a central location, away from the site boundaries;
- water source on site at all times to moisten surfaces of stockpiles during dry and windy weather conditions;
- speed controls implemented and enforced on all internal haul roads;
- routine maintenance of all onsite vehicles;
- regular inspection and maintenance of internal haulage roads and access road;
- wheel wash located at weighbridge to be used by all exiting vehicles;
- regular inspection for signs of track-out on local roads in vicinity of site access to and removal of any dust deposits;
- temporary cessation of site activities in the event that unacceptable dust emissions can be seen crossing the site boundary in the direction of sensitive receptors; and

- a trained site manager (or his deputy) on site during working hours responsible for the effective implementation of dust control measures.
- 13.12 Additional measures that have been identified as effective mitigation measures during the proposed restoration works are the retention of the existing woodland along the south-western, southern and eastern boundaries and the working of the application site in a five distinct phases.
- 13.13 As described previously in this chapter, there have been no complaints received with Horsham District Council or Britannia Crest Recycling Ltd in the last 2 years in relation to dust emissions.

Air Quality Mitigation Summary

- 13.14 It is therefore considered appropriate to assume that the current dust control measures are effective in suppressing any dust generated from the existing activities on site. Although the proposed activities involve inert waste deposition to complete the revised restoration plan, the activities that would be undertaken on site are directly comparable to those currently in operation in relation to the sand extraction.

NOISE

Temporary Acoustic Screens

- 13.15 The erection of temporary acoustic barriers or screens in the area where the excavator and dozer are working would provide some degree of noise attenuation. The screen would need to be positioned so it shields each noise sensitive receptor from the noise generated by the dozer and excavator when they are working at their closest approach to each property.
- 13.16 The approximate locations of the acoustic screens are shown on the drawings in Appendix 8/D of Technical Appendix Volume 2B.
- 13.17 The barriers/screens would need to be of a solid construction and at least 3.0m high.
- 13.18 The Table below repeats the assessment for Locations 2 and 3 assuming that the barriers/ screens described above are in-situ.

Table 13-0
Operational Assessment, Including Acoustic Screens, free-field, dB

Location	Predicted Noise Levels $L_{Aeq,1hr}$	Criterion, $L_{Aeq,T}$	Difference
2 - Cadrona	53.7*	53.0	+0.7
3 – Chanctonbury Lodge	53.3	55.0	-1.7

* Barrier positioned to the south of the dozer and excavator whilst they are operational nearest Location 1

- 13.19 The Table above shows that assuming the temporary acoustic barriers or screens have been correctly erected the predicted noise levels generated by worst-case operations would now meet the criterion derived in accordance with the Technical Guidance to the NPPF at Location 3.
- 13.20 The table above also shows that the predicted noise levels at Location 2 would still slightly exceed the derived limit; however it should be noted that the noise survey was undertaken on a Saturday afternoon when existing operations at the Washington Sandpit had ceased.
- 13.21 In reality noise from existing operations would contribute to the noise climate during normal operational hours; consequently it is considered that the prevailing noise levels at Location 2 would be higher during a normal working week.
- 13.22 The higher prevailing noise levels would mean that the specified noise criterion at Location 2 would also increase potentially meaning that the predicted noise levels would subsequently be within the noise limits.
- 13.23 It also must be noted that the predicted noise levels at Location 2 are still below the maximum limit of 55dB LAeq, 1hr during the daytime (07:00 to 19:00 hours) specified in the Technical Guidance to the NPPF.

Noise Mitigation Summary

- 13.24 All the noise predictions are based on a worst-case situation during the initial period of the development when extraction and infilling activities will take place simultaneously. Once the extraction activities have ceased the predicted noise levels will almost certainly be lower at all the nearest noise-sensitive receptors.

WATER ENVIRONMENT

- 13.25 A number of operational mitigation measures and best available techniques have been incorporated into the scheme design, which would reduce the potential risk to ground and surface water.

Groundwater

- 13.26 Best practice techniques would be incorporated within the management procedures for construction and operation activities onsite in order to protect the water environment from pollution incidents. The mitigation measures can be summarised as follows:
- during construction there would be heavy plant and machinery required on site and as a result it is appropriate to adopt best working practices and measures to protect the water environment, including those set out in the Environment Agency's Pollution Prevention Guidance (PPG1);
 - in accordance with PPG2 all above ground on-site fuel and chemical storage would be bunded;
 - an emergency spill response kit would be maintained on site;

- a vehicle management system / road markings would be put in place wherever possible to reduce the potential conflicts between vehicles and thereby reduce the risk of collision; and
 - a speed limit would be imposed on site to reduce the likelihood and significance of any collisions
- 13.27 The above measures would significantly reduce the likelihood of pollutants being discharged from the Site, such that the overall risk is reduced to 'low'.
- 13.28 The proposed processing/recycling and restoration scheme would also be subject to an Environmental Permit, the application for which would include appropriate measures to avoid unacceptable impact on the environment including water.
- 13.29 Furthermore, the site design and mitigation measures would ensure that there is a low or negligible risk of discharge of hazardous substances (e.g. mineral oil) to groundwater or that the proposed operations would cause pollution of groundwater as a result of discharge of non-hazardous substances.

Surface Water

- 13.30 Sustainable drainage systems (SuDS) would be implemented across the Site in line with the requirements of the NPPF and best practice to satisfy surface water management and water quality criterion and objectives.
- 13.31 However, the north eastern area of the Site is currently underwater forming a water body extending onto the adjoining CEMEX UK site and currently used as part of their operations. It is our understanding that this pond will be retained as part of the restoration scheme with a pumped outfall into adjacent watercourse(s) to maintain a designed water level of approximately 38.00m AOD.
- 13.32 It is proposed that the potential increase in rate and volume of runoff from the restored landform and proposed processing/recycling be negated through the use of the existing pond. As the pond will retain a pumped outfall, off site discharge will be controlled in line with the relevant discharge consent and Environmental Permit. The management of the pond, including discharge permit and operation, will continue to operate under Riparian Law.
- 13.33 In addition to the above, it is proposed that a network of swales be provided within the design of the restoration scheme to provide surface water quality benefits in the form of pre-treatment. The proposal is to provide a series of swales to capture surface water runoff from the restored landform prior to its discharge into the existing pond.
- 13.34 The FRA (Technical Appendix 9/Volume 2B) provides details of the proposed surface water management.

Flood Risk

- 13.35 No formal flood mitigation measures are necessary in order to adequately manage and reduce risks to an acceptable level for the lifetime of the proposed development.
- 13.36 Due to the low residual risk of flooding from an event exceeding the proposed design criteria no specific flood resilience measures are necessary.

Water Environment Summary

- 13.37 Thus, following review of the mitigation included in the site design and the specific mitigation measures identified, the overall potential significance of impact to the water environment is assessed as acceptable.

LANDSCAPE & VISUAL

- 13.38 A Landscape Restoration Management Plan (LRMP) has been provided please see Technical Appendix 10 Volume 2B.
- 13.39 The main aims and objectives of the LRMP are to conserve and enhance the character and ecology of the local area in line with the West Sussex County Council Landscape Management Guidelines (2003), as well as maintaining and enhancing the overall integrity of the Sandgate park area and proposals for a country park in line with Horsham District Council LDF Policy AL19, as follows (paragraph 3.65):

“There is scope to create a variety of formal and informal recreation uses following sand extraction at Sandgate Park between Water Lane and Hampers Lane. The grading and landscaping process with respect to lagoons in the east of the site has already begun. These areas could be used for informal recreational purposes as well as fishing and water sports such as windsurfing. There is a need for small campsites for "backpackers" within easy reach of the South Downs Way and also a hostel or "bunkhouse" accommodation, providing simple dormitory and self-catering facilities. It is considered that Sandgate Park could provide such facilities given its proximity to the South Downs Way, just half a mile away. Sandgate Park could also be a suitable location for additional active sports provisions such as football pitches.”

ECOLOGY

- 13.40 Due to the fact that the proposed scheme is for a time extension to existing extraction of sand and for the revised restoration of the site and providing all existing measures and controls relating to this site are maintained, no additional mitigation measures to those already in place at the site are proposed or deemed necessary.
- 13.41 Ecologists have and will continue to provide input to the landscape design for the restoration of the site, to ensure that opportunities are taken to maximise

the ecological value of the site through its restoration for use as a country park.