Augean SOUTH LTD

APPLICANT'S HEARING SUMMARIES FOR ISH1 AND ISH2

FOR THE DEVELOPMENT CONSENT ORDER APPLICATION FOR THE ALTERATION AND CONSTRUCTION OF HAZARDOUS WASTE AND LOW LEVEL RADIOACTIVE WASTE FACILITIES AT THE EAST NORTHANTS RESOURCE MANAGEMENT FACILITY, STAMFORD ROAD, NORTHAMPTONSHIRE

PINS project reference: WS010005

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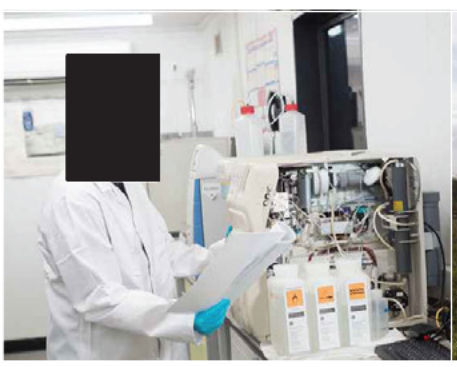
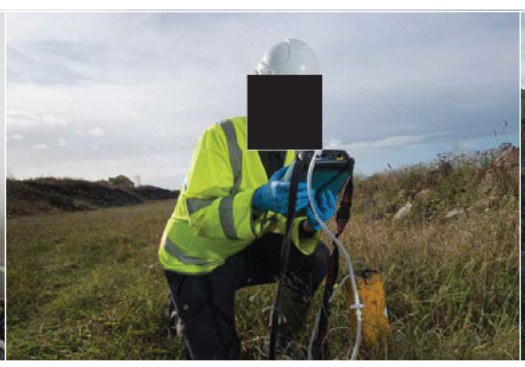


WRITTEN SUMMARY OF THE APPLICANT'S ORAL CASE AT ISSUE SPECIFIC HEARING 1

1. INTRODUCTION

1.1 This document summarises the case put forward by Augean plc (the Applicant), at the Issue Specific Hearing 1 (ISH1) on the draft Development Consent Order (dDCO) which took place via MS Teams on 29 March 2022.

1.2 Claire Brook of Womble Bond Dickinson (UK) LLP (WBD) represented the Applicant and was assisted by experts at MJCA, D B Landscape Consultancy and WBD:

1.2.1 Kate Ashworth (WBD) represented the Applicant on the drafting of the dDCO;

1.2.2 Leslie Heasman (MJCA) represented the Applicant on technical points relating to the drafting of the dDCO; and

1.2.3 David Brittain (DB Landscape Consultancy) represented the Applicant on landscape and visual elements relating to the parameters drafted in the dDCO.

1.3 The summary of the submissions below follows the Examining Authority's (ExA's) Agenda for those items that were covered at the Issue Specific Hearing. It also sets out any follow-up actions and clarifications the Applicant finds it necessary to make following discussions during the Issue Specific Hearing.

2. REPRESENTATIONS AT THE ISSUE SPECIFIC HEARING 1

Table 2.1 - Written summaries of oral submissions made at Issue Specific Hearing 1

Item	ExA Question/Context for discussion	Applicant's Response	Follow-up
AGENDA ITEM 3 – Draft Development Consent Order			
a(i)	Protective Provisions (Article 15 and Schedule 6) The need for the Explanatory Memorandum (EM) to provide more detail on the context and derivation of Schedule 6.	Bespoke protective provisions (PPs) have been requested by each of the three statutory undertakers, so once these have been agreed, the intention is to update Schedule 6 and replace the standard provisions with the bespoke wording. The Applicant offered to include some summary text on the current drafting if useful. This would be superseded once all bespoke drafting is agreed. The ExA confirmed that the EM need only be updated in the future once bespoke PPs have been agreed.	The Applicant will continue to negotiate and finalise the bespoke PPs and, following this, submit an updated version of the Explanatory Memorandum.
a(ii)	Update on discussions on the Protective Provisions.	**Western Power Distribution (WPD)**: the Applicant has reviewed and commented on a first draft of bespoke PPs and a second draft has now been issued by WPD. The Applicant is hopeful that we are close to reaching agreement on these PPs. **National Grid Gas (NGG)**: The status of PPs with NGG is in a very similar position to those for WPD; the Applicant has reviewed and commented on a first draft of bespoke PPs and a second draft has now been issued by NGG. Again the Applicant is hopeful that we are close to reaching agreement on these PPs. **Anglian Water**: a first draft has been issued by Anglian Water for review. However, discussions regarding standoff distances are ongoing and need to be resolved before it will be possible to agree the drafting of the PPs.	As above.
	Anglian Water were invited to input any	The Applicant does take this matter very seriously and, as with all other environmental impacts, this has been assessed. The Applicant notes that the	The Applicant will continue to engage with Anglian Water and seek to signpost

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	concerns they have and raised points regarding standoffs.	concerns of Anglian Water have only been raised recently (March 2022) despite discussions starting in 2020. The Applicant is endeavouring to provide the information required to satisfy Anglian Water that all necessary assessments have been carried out. The Applicant will go on to summarise the questions raised to date, acknowledging there may be some concern over issues raised by members of the public who are listening in to or attending the Hearing. The Applicant recognises Anglian Water's need to ensure that the quality of water in pipelines is protected and is engaging with them. There is information needed from Anglian Water as well as the further information the Applicant can provide. Regarding contamination, the water pipelines are located near the ground surface (1-2m below). However the base of the landfill will be 10m below the base of the ground. Leachate (contaminated liquor) is collected at the base of the landfill and must be maintained at no more than 1m in depth at the base. The landfill is fully surrounded by engineered containment, which is tested and confirmed by the Environment Agency (EA). In overall terms, the pathway for contamination to occur in the pipes does not exist. Regarding LLW concerns, the Applicant understands this to be that radioactive waste might affect the water within the high pressure pipeline. However, this risk does not exist because the LLW on site is and will be controlled by the permit for LLW disposal. The controls in place in terms of the nature of LLW radioactivity are such that there is no conceivable way gamma radiation could have an impact on the water in the pipeline. It is not a conceivable pathway. The Applicant is able to provide more detail but is confident in the assessment carried out and further discussions are planned with Anglian Water.	the assessments which have taken place to reassure Anglian Water of their concerns. Further assessments will be carried out if necessary.
	The ExA queried whether further investigations would represent information already in the Examination, or if this	The Applicant's view is that it is a case of understanding precisely what the concerns of Anglian Water are. Once this is established in detail, the Applicant will then be able to explain the relevant assessments that have been carried out. The Applicant doesn't believe further investigations will be necessary. The Applicant has carried out extensive site investigation and this is demonstrated within the application documents – Anglian Water may not	-

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	will be a further on-site investigation?	be aware it is there. Lots of work has been carried out on slope stability and this has recently been provided to Anglian Water. The Applicant sees no need to carry out additional site investigations, which would delay the process.	
b(i)	Articles: Article 2. Use of the appropriate reference numbers used for plans and documents.	The Applicant had used references as per other DCO examinations but will make the update as requested by the ExA.	The Applicant has made this amendment and submitted an updated dDCO at Deadline 4.
b(ii)	Article 4(2). Whether the updated dDCO properly controls the point at which the Requirements come into force	.	The Applicant notes that Phil Watson of North Northamptonshire Council (NNC) is content with the wording of Article 4(2) of the dDCO.
b(iii)	Article 10. Could the flexibility provided by this Article lead to unassessed and potentially significant impacts?	The Article primarily refers to the creation of a new access because this Order will come into force and the existing one will fall away, so the power is still required albeit retrospectively. It also then goes on to permit any improvements that may be required. At this stage, the Applicant has no intention to create or relocate a new access. With regard to Environmental Impact Assessment implications, the article makes it clear works may only occur within the Order limits, so within the parameters of the assessment. Authorised works in Schedule 1 include hard standing, so works of that nature have been assessed within the Order limits. And in any event, the Applicant would need local highway authority approval, in consultation with the local planning authority. Therefore, any new access would be subject to scrutiny by those bodies regarding environmental impacts as well as pure highways impacts.	The Applicant has updated Article 10 to make it clear that the access can only be provided in accordance with the access plan **[APP-010]**. An updated dDCO has been submitted at Deadline 4.

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		However, the Applicant notes the ExA's concerns in this regard and will tighten the wording in Article 10 to make it clear only an access in the current location is permitted.	
c(i)	Schedules: Schedule 1 and Requirement 8. Should these provisions control in more detail the amount of Low Level Waste (LLW) which could be deposited at the site? For example, is it necessary to provide control in order to prevent the concentration of LLW being deposited in a particular cell or location? In this regard, it is noted that the application for the LLW Environmental Permit (EP) (and the associated Environmental Safety case) will not be available until after the Examination has closed.	The DCO as drafted controls the overall amount (volume/mass which is different to radiological capacity) of LLW that can be disposed of at the site through Requirement 8. It would be inappropriate to impose additional controls on the quantities of LLW through the DCO. Radiological capacity affects its potential environmental effects. The permit for the LLW landfill will define any and all restrictions necessary for the individual isotopes and the overall radiological capacity at the site. The current permit (and we would anticipate also the future permit) includes additional locational restrictions based on the risk assessments in the ESC such as no LLW within 2m of the side of a cell, certain isotopes (where necessary) not within a defined depth to the cell surface etc depending on the outcomes of the risk assessments. If there was a requirement that the total capacity within an individual phase or cell or indeed a particular area of the site needed to be restricted then that would be included as part of the Environmental Permit. In general terms, there are exposure criteria which are set to protect human health and the environment set by national and international bodies and those dose criteria, as set out in the ES, are the maximum outcome that it must be demonstrated would result from all exposure pathways in the risk assessment. This includes both what will happen and any unexpected events. The safe exposure criteria will be maintained at those boundaries. This protection is in place not just for people and the environment, but also for water quality. We can therefore be confident that the quality of water, the ecology and people's health will be protected on the issue of the Environmental Permit, because the Environmental Permit will itself include those restrictions that are necessary. An overall restriction per cell has not been necessary to date because there is currently no probable need for this to be limited.	
	The ExA noted that the LLW permit has	The previous DCO application at this site went forward on the same timetabling. The LLW permit application had not been submitted at the time	

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	not yet been submitted.	of the examination in late 2012 and the LLW permit was issued in 2015 after the DCO was issued in 2013. One of the reasons for delaying the LLW permit application relates to the hazardous waste landfill permit application. Various aspects of the permit for the hazardous waste landfill, in particular the hydrogeological risk assessment, contains parameters and assumptions which need to be agreed with the EA. Once this model is fully agreed with the EA, this can then be used for the groundwater impact aspects of LLW deposited at the site. There is a logical sequence. The hazardous waste landfill permit variation application was submitted in May 2021 and still is going through discussions with the EA. There is ongoing progress, but it is a long process and the sequence of approach is logical.	
c(ii)	Schedule 1 and Schedule 4. Do these Schedules (together with DEC Appendix C (Relevant Parameters [APP-110] provide sufficient control over Works 2 and 3?	The Applicant's response to written question 8.1.3 **[REP2-006]** sought to resolve this point but further detail can be provided. The LVIA **[APP- 088]** looks at the site as a whole in terms of proposed development. It did not specifically look at development 15m high in Work No. 2 from all viewpoints at the time it was written but further information was provided later in response to ExQ1 8.1.3. The Applicant did carry out some visualisation work to indicate what the visibility of a 15m high single structure would be in Work No. 2 and this indicated it would not be possible to see clearly a 15m building located anywhere in Work No. 2 from the nearest potential residential property receptor (VP13) or VP9 (PRoW). The only place from which a 15m high building in Works area 2 could potentially be seen clearly is from VP3 (PRoW) (approximately 120m to the west of the site) and the assessment indicated it would be visible from approximately a 52m length of the footpath. With regard to Work No. 3, the main storage shed is well hidden behind a well-established large hedgerow. The only place it is possible to see this building is as one approaches the site from the south for a short distance along the road (Stamford Road). The possibility of seeing any other building is limited in terms of the landscape and visual impact that would cause. Appendix C of the DEC **[APP-110]** at page 2 does expressly confirm the envelopes that have been assessed as a 15m high structure for Work No, 2.	The LVIA **[APP-088]** does not assess the views of Work No 2 and Work No 3 from every viewpoint as for several viewpoints there are no views of either the site or of Work Nos 2 or 3. A summary of the viewpoints and the assessments undertaken for Work Nos 2 and 3 is presented at document reference **[11.3]** submitted at Deadline 4. <u>Work No. 2: Waste Treatment and Recycling Facility</u> In the LVIA **[APP-088],** views of Work No 2 were assessed for VP3 and VP13. A montage has been produced (**Drawing number EN0RTH035 Document reference 11.3***)* from VP3 which shows partial views of a 15m high building within Work No 2. The

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		Schedule 1 of the dDCO (V1) does include control regarding structures in Work Nos. 2 and 3 because it includes the parameters in Schedule 4. The Applicant currently considers that the dDCO provides sufficient control over Work Nos. 2 and 3, but will provide more detail at Deadline 4.	building would be visible from VP3 as are parts of the current waste treatment and recycling facility. There would be no significant effects which is consistent with the conclusions of the LVIA for views from VP3. A drawing has been produced for VP13 (**Drawing number ENORTH036 Document reference 11.3**) which shows a dashed yellow line representing the top of a 15m high building in Work No 2 at the operational stage of the landfill site (Phases 20 and 21. As indicated on the drawing, there would currently be very limited glimpses of a 15m high building consistent with the views of the existing silos at the waste treatment and recovery facility. Any such structure would be fully screened in a few years by the restored current landfill site. There are no significant visual effects associated with a 15m high building which is consistent with the conclusions in the LVIA and Environmental Statement. <u>Work No. 3: Site Reception and Office Area</u> Views of Work No 3 were assessed in the LVIA [**APP-088**] for VP 9 and VP11

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			and general comments were provided for the views from VP13. Drawing number ENORTH034 **[Document reference 11.3]** shows additional Viewpoints VPA and VPB, close to VP13. These viewpoints have been considered to provide additional clarification on the potential visibility of 8m high building(s) within Work No 3. VPA and VPB do include the existing 7.9m high storage shed and indicate how additional buildings 8m high within Work No. 3 would have limited effects on visual receptors at these locations. None of the other smaller buildings are visible in the site reception area so there is no need to restrict the number or locations of the smaller buildings (typically single or double height portacabin type structures) within Work No 3. In summary, the information above provides supplementary information on the visibility of existing structures within Works Nos 2 and 3 from key viewpoints. The associated drawings provide information in relation to two viewpoints considered in the LVIA (VP3 and VP13) and two new ones (VPA and VPB). The information and drawings consider the visual effects of introducing new structures into the Works areas. The conclusions reached

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			are identical to those reached in the LVIA: additional built development in Works Nos 2 and 3 would not cause significant effects on visual amenity. The LVIA assessment included as part of the application has assessed the likely significant impacts within the Rochdale Envelope parameters which are proposed to control the development within Work Nos 2 and 3 (Appendix DEC C, **APP-110**).
d(i)	Requirements: Having regard to the provisions of Regulation 6 of the Infrastructure Planning (Interested Parties and Miscellaneous Prescribed Provisions) Regulations 2015, is there a sound reason for reducing the time limit for commencement of development from 5 years to 3 years?	The Applicant has drafted this provision in line with regulations so proposes keeping the timescale at 5 years.	The Applicant notes that Phil Watson of NNC is now content with the wording of this provision in the dDCO.
d(ii)	Does the updated version of Requirement 4 provide adequate control over phasing and	The first provision now requires the authorised development to be carried out in accordance with Ecological Management, Monitoring and Aftercare Plan (EMMAP) [**APP-110**] and the first stage of phasing table within that document until a more detailed phasing restoration scheme is achieved.	The Applicant welcomes that the updates made to this requirement satisfy the EA's request and that Northamptonshire

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	landscaping for interim phases of the development?	Paragraph 2 requires submission and approval of that plan, setting out more detail. This must accord with principles of the EMMAP and restoration Scheme. This must be submitted within 24 months of the Order being granted. This detailed scheme would go to the local planning authority for approval, following consultation with the EA (which has been added at the EA's request). The detailed scheme must contain those details listed in paragraph 3, which include: phasing timescales, all proposed hard and soft landscaping works and ecological enhancement measures, as well as all the principles from the outline that must make their way into the detailed scheme. The next provision allows an element of flexibility and adaption to changing conditions because of time periods over which this plan will apply. Every 24 months, the Applicant must submit an updated phasing, landscaping and restoration scheme to the relevant planning authority– particularly regarding ecological matters such as instances where planting is not doing well, adaptations may be needed in light of ongoing monitoring and management. Paragraph 5 requires any planting that dies or is removed within 10 years of planting to be replaced. Paragraph 6 requires the site to be restored by 2046 at the latest and that all landscaping and restoration is carried out for a minimum period of 20 years in accordance with the approved landscaping and restoration scheme and to a reasonable standard in line with British Standards or other codes of good practice. Paragraph 7 secures the commitment to provide public access to the proposed development in accordance with the details set out in the phasing, landscaping and restoration scheme. The scheme will be developed in consultation with the relevant planning authority to ensure there is a balance between allowing habitats to become sufficiently established and allowing public access to restored areas.	County Council are content with this approach.

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d(iii)	Requirement 4. Should the phasing, landscaping and restoration scheme be submitted for approval in less than 24 months from the date of the DCO?	If the DCO is implemented within a short time of grant of the DCO (days, weeks is very likely), there are a number of actions needed before cell construction can commence. The pre-operational mitigation measures are set out in the EMMAP and must be complied with R4(1). The phasing sequence is set out in the DEC Appendix DECD **[APP-110]** so work must start in Phase 12 first. Pre-operational planting needs to be carried out, species protection licenses need to be obtained, the electricity cable needs to be diverted so the Applicant can access the western area, fences need to be erected, soil stripping is needed for the haul road and Phase 12 (there is an archaeological watching brief for areas of the haul road), the detailed design of the surface water drainage scheme also needs preparing for Phase 12 to be agreed with EA (and others including the LLFA) before the cell excavation can commence followed by construction of the engineered containment system. All these works are likely to take more than 12 months. The time taken to fill a cell will be approximately 1 year followed by capping after that. Accordingly, no restoration is likely to take place any earlier, and probably much later, than 24 months from the date of the order. The commitment for restoration of the first phase (Phase 12) (ES para 5.2.14, pdf pg 44) is '*The current projection is that the first, northernmost, area (Phase 12) will be restored in around 5 years from the start of the commencement of cell excavation work in that phase*'.	The Applicant reiterates that as there will be no need for the Phasing, Landscaping and Restoration Scheme to be implemented for at least 24 months there is no need for a condition to require that it is produced in a shorter timescale. The Applicant notes that North Northamptonshire Council are content with the proposed timescale.
	The ExA queried what activity would prevent the Scheme being prepared earlier.	24 months is a typical timescale for schemes of this type. The Applicant would also want to develop the scheme in discussion with bodies invested in making sure it is the best scheme to suit everyone. For example, Natural England and local interested organisations would be consulted. This is not a case of the Applicant producing a scheme and submitting it. That 24 months would be used to produce what is hopefully a virtually complete scheme which has been agreed as far as possible with the organisations mentioned.	The Applicant notes that Phil Watson of NNC is content with the proposed timescales and that whilst Natural England would want the scheme as soon as possible, it is appreciated that a longer period may be required. The Applicant confirms that engagement with organisations including Natural England will start well before the 24 month submission deadline.

Item	ExA Question/Context for discussion	Applicant's Response	Follow-up
e	Aftercare, including whether the application provides sufficient control to secure the long-term management and maintenance of the site following restoration (Applicant response to Q9.1.1 and NNC response to Q4.4.1).	Following comments received from NNC, the Applicant has updated Requirement 6 to ensure the wording refers to a minimum period of 20 years management and maintenance. The site is subject to 2 different aftercare types. The aftercare controlled through the DCO relates to the landscaping, the maintenance of the planting and the pathway etc. The current site, which has a similar restoration scheme is subject only to a 10 year aftercare period in the current DCO. Most parts of the site will be subject to much longer aftercare periods. If development consent is granted in 2023, the first phase will be restored by around 2028-2030. This allows approximately 36 years of aftercare in the most sensitive areas which is the northern area between the 2 woodlands. Areas of the current site will be restored well before this. Beyond the 20 year DCO aftercare period the permit operator (the Applicant) will retain responsibility under the permits. The permits do not include planting but they do include all aspects relevant to the environmental impacts including the soils above the capping layer, management of drainage and other site controls and monitoring. The permit cannot be surrendered until the EA accept that there are no unacceptable risks to the environment if the site is no longer managed. This aftercare under the permit is typically a minimum of 60 years and in reality may be much longer. There is a financial provision that goes with the permit and is calculated in the standard way with the EA to make provision if an operator defaults in its obligations. The fund is accessible to carry out works the operator would otherwise carry out; like a bond. The surface of site will be maintained under permit, so that it is included with the funding. Any tree replacement/vegetation replacement would not be included within this financial provision. The operator is the funding body to carry out maintenance work within the dDCO. If they are in place, they are obliged to carry out the obligations for the permit. They are also in place to fulfil obligations in the DCO regarding broader landscape obligations. The Applicant confirms that the dDCO defines Augean (the Applicant) as 'undertaker' so under the Planning Act 2008 it would be subject to criminal	-

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		enforcement sanctions in relation to any breach of the DCO. This process is different to that under the Town and Country Planning Act 1990. This requires Augean by law to comply with the requirements contained within the dDCO. The restoration commitments are adequately secured in the DCO on that basis.	
f	Option agreement. Is there a version of the option agreement signed by both parties?	The Agreement was executed in counterpart so there are two documents, one executed by one party and another by the other. They are identical other than the signature page. The Applicant is happy to provide the other document with the redacted signature page.	The Applicant has submitted the counterpart signed by Howard Farms Ltd at Deadline 4. **[Document reference 9.2.1.4.2A]**

WRITTEN SUMMARY OF THE APPLICANT'S ORAL CASE AT ISSUE SPECIFIC HEARING 2

1. INTRODUCTION

1.1 This document summarises the case put forward by Augean plc (the Applicant), at the Issue Specific Hearing 2 on environmental matters which took place via MS Teams on 29 March 2022.

1.2 Claire Brook of Womble Bond Dickinson (UK) LLP (WBD) represented the Applicant and was assisted by experts at MJCA, Augean and WBD.

1.2.1 Leslie Heasman (MJCA) represented the Applicant on environmental matters;

1.2.2 Dr Gene Wilson (Augean) represented the Applicant on matters relating to ecology and Augean specific questions;

1.2.3 Jo Congo (MJCA) represented the Applicant on matters relating to hydrogeology.

1.3 The summary of the submissions below broadly follows the Examining Authority's (ExA's) Agenda for those items that were covered at the Issue Specific Hearing.

2. REPRESENTATIONS AT THE ISSUE SPECIFIC HEARING 2

Table 2.1 - Written summaries of oral submissions made at Issue Specific Hearing 2

Item	ExA Question/Context for discussion	Applicant's Response	Follow-up
AGENDA ITEM 3 – ENVIRONMENTAL CONTROLS			
a	Update on submitted Environmental Permit (EP) variation applications (Applicant and EA responses to Q1.1.2).	In summary, the hazardous waste landfill and recovery and treatment facility permit variation applications were submitted to the EA in May 2021. The waste treatment and recovery facility application was Duly Made on 18 January 2022 and the hazardous waste landfill application was Duly Made on 4 March 2022. Further information was submitted to the EA in response to a Schedule 5 Notice request for the waste treatment facility application on 14 March 2022. The Applicant also received, late yesterday, a request for further detail from the EA on the application for the treatment facility so matters are moving along.	-
	The ExA queried what further information had been requested.	The further requests were not regarding points of principle. The information was regarding the layout of stockpile locations and clarification on the nature of some waste types to be accepted. These are points of detail and not points of principle. The Applicant is moving through an EA process so the timescales are out of its hands.	-
b(i)	Low Level Waste (LLW) Environmental Permit (EP) (Applicant's responses to Q.1.1.1 and Q1.1.4): Why won't the application be made until after the examination closes. Paragraph	The risk assessments forming the bulk of the permit application for the LLW landfill site extension are being prepared but cannot be finalised at this stage until the hazardous waste landfill application has been progressed further in terms of review by the EA. The conceptual site model and the assumptions and details used in modelling hydrogeological risk assessments will be discussed in the application for hazardous waste landfill. The principles of this approach will be the same as those used for the current permit and this has been discussed and agreed with the EA. While the EA review of the hazardous waste landfill continues work has commenced on the draft ESC based on these previously agreed principles. This approach was followed for the current DCO for which the Examination was held in 2012, the DCO was issued in 2013 and the LLW permit application was	-

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	4.7.7 of the NPSHW advises that applicants should start work on EP applications at least 6 months prior to the submission of the DCO application	Duly Made and issued in 2015. It was the same situation for the current hazardous waste landfill site and the treatment facility whereby the varied permits were not issued until after the DCO had been granted in 2013. Any controls necessary to restrict the radiological capacity to achieve the dose criteria as explained in the Environmental Statement (ES) means that the ExA can rely on the assumption that the pollution control framework will be implemented effectively and that emissions from the site when granted a permit will not be harmful to health or the environment. The controls in the permit will be designed to make sure the site activities meet the design dose criteria set out in the ES and the assessment of likely significant effects have been based on this approach.	
b(ii)	Implications of the absence of the LLW application/consent and associated Environmental Safety Case including the management of monitoring of LLW and the use of the ERICA toolkit	The Applicant is content to add wording into the SoCG regarding the use of ERICA toolkit in terms of biodiversity impacts to provide assurance that these matters have and will be assessed as part of the permit application when submitted and the controls will be imposed as described.	The Applicant has included this within the SoCG with the Environment Agency submitted at Deadline 4. [Document referend 9.3]
b(iii)	Clarification of how monitoring for radioactivity would be undertaken and controlled in the variations to the EPs.	The Applicant is content to add wording into the SoCG summarising the monitoring regime in the existing LLW permit and to comment on whether any variation is anticipated in the new permit.	The Applicant has included this within the SoCG with the Environment Agency submitted at Deadline 4. [Document referend 9.3]
c(i)	EP breaches (Applicant and EA responses to Q1.1.3, Applicant response	If you look through the breaches identified by the Applicant and the EA in responses to written question 1.1.3 **[REP2-006]**, those relating to leachate levels are in 2010-2011 and 2014-15. Historically there were significant areas of the site uncapped and this caused leachate levels to fluctuate. With the exception of the	The Applicant notes the EA's agreement that temporary increases in leachate won't cause any immediate effects and that these are

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	to D2 submission, Trust Written Representations (WR): There appears to be a consistent pattern of elevated leachate levels at the existing site. Does this have any implications for the design or controls used in the Proposed Development?	issue in 2019 explained below leachate levels have been compliant since the cells were capped. Since September 2019 there were issues in 2 leachate wells on the site where the leachate wells had become blocked giving incorrect readings of leachate levels and this was communicated to the Environment Agency as part of the routine monitoring submissions [Page 9 of **REP2-006**]. The Applicant's first action was to investigate the blockage. The next step was to try and redrill the wells. In discussion with the EA, it was agreed that because the Applicant had built in redundant wells, which is typical for this type of development, there were enough wells for the appropriate monitoring of leachate levels hence it was not necessary to redrill the wells. Regarding any implications for new areas, the Applicant has demonstrated the ability to control levels. Temporary exceedances will have no impact and at no point were levels out of control. If there are difficulties in the extension area, the Applicant can drill further wells to achieve extraction of leachate. This is closely regulated by EA (as illustrated by the breaches recorded) and is a closely monitored issue. The EA can enforce capping to take place through the permit if they think it has been delayed.	regular occurrences on most landfill sites.
C(ii)	Spring 2020 incident including, an update on monitoring and mitigation measures for Trust land, the adequacy of the measures put in place to prevent re-occurrence and the implications for the fitness of the Applicant to operate the facility.	On the first point, the Applicant confirms that it is explicitly clear from the correspondence in question that the surveys requested are for determining the appropriate mitigation for the area and the offer to undertake those surveys remains open. On the third point, the incident specifically relates to contamination from an unsurfaced haul road, following a month of continuous rainfall and two storms which resulted in mobilisation of silts that spilled over into the adjacent land. Measures taken to prevent reoccurrence have been to re-concrete that road and ensure it can be kept clean. The road extends along the northern boundary of the treatment plant and south along the eastern edge of the treatment area. The road will be visible on the upcoming site visit. The Applicant is controlling contamination and preventing a build-up of silt. The Applicant has also created an additional drainage interception ditch and a large interception bund constructed around the	The Applicant notes the EA's confirmation that improvements to the internal haul road have been carried out since the incident. The Applicant notes that the effects on vegetation is not a concern Natural England (NE) have raised in particular. The Applicant notes that permission is awaited from the Cecil Estate Family Trust regarding monitoring so arrangements can be put in place.

Item	ExA Question/Context for discussion	Applicant's Response	Follow-up
	The ExA noted that the Cecil Estate Family Trust have raised three main issues: 1. Arrangements for monitoring to be done 2. Elevated chloride levels and whether proper assessment against standards 3. Measures to be put in place to prevent future reoccurrence.	area for the unlikely event of material running off the road to be captured before it reaches the site boundary. On the second point, the standards referred to are series of guidance levels which are set for the assessment of contaminated land. There are different standards for different uses of land. The guidance levels are set for a number of different contaminants. There is no standard set for chloride as chloride is not a toxic material – we all put it on our food every day as table salt (sodium chloride) so no level in soil is considered a health risk. The potential effect caused as a result of the incident is on vegetation and wildlife and how they are affected by the salty water (in simple terms) and that is the ecological impact which has and continues to be assessed. There is no equivalent standard of methodology in terms of determining the effect of chloride on biodiversity as such. Different plants have different environments in which they adapt and survive. It depends on the type of vegetation and what that is exposed to. The assessment is carried out compared with the baseline condition.	
d	Greenhouse Gas (GHG) Emissions. Whether the Applicant's approach to the assessment of GHG emissions is appropriate having regard to both the NPSHW and the Government's subsequent adoption	The Applicant notes its response to written question 1.2.1. The Applicant emphasises the approach taken in the National Policy Statement for Hazardous Waste (NPSHW), which is different to other NPSs because other NSIPs have a greater propensity to contribute to the carbon budgets. Parliament has approved those GHGs are more likely to be significant. That is the judgement Parliament has taken. In taking a different approach, the approval by Parliament of the NPSHW, recognises that climate aspects are of a different nature for schemes such as this. Paragraph 2.39 of NPSHW states that the concern expressed is not about GHG emissions from facilities but relates to resilience to climate change.	The Applicant has provided a table of the potentially relevant GHG related policies and targets for this facility at Deadline 4. **[Annex B, PINS document reference 11.3]** Parliament has approved a different approach in those other NPSs where GHGs are more likely to be significant, to provide that any increase in carbon emissions is not a reason to refuse

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	of the Net Zero 2050 target and the UK Sixth Carbon Budget.	Parliament has not found it necessary to review the NPSHW yet. Looking at more recent policy, for example, the Net Zero Strategy, this has not changed the strategy in the NPSHW. If there was an issue, there was an opportunity for the NPSHW to be updated but it wasn't. Net zero forms part of the Government's annual update, there are two targets for the waste sector and neither relate to activities in this specific sub-sector. Food waste reduction and elimination of biodegradable waste generate/potentially generate the most GHG and neither are relevant to this scheme because the site doesn't have biodegradable waste and there is a restriction on organic waste accepted. There are a number of policies and the Applicant will provide these references to the Examination. There is also an obligation within the permit for the operator to review activities on regular basis to see if further improvements can be made regarding emissions.	development consent, unless the increase in carbon emissions resulting from the proposed scheme are so significant that it would have a material impact on the ability of Government to meet its carbon reduction targets. That is the judgement Parliament has taken for national networks (e.g. para 5.18 in the NPS for National Networks dated December 2014) and energy. The Applicant has included references in the SoCG with the EA regarding the conditions in the Environmental Permits which relate to requirements for the review and minimisation of activities which result in GHG emissions.
e	How will gas management be controlled as part of the landfill EP variation?	The generation of landfill gas at the site is governed by the nature of waste deposited in it, for the western extension and for all waste being deposited at the current site since 2004 there is a limit of 6% organic carbon. This does not generate sufficient gas to be collected/managed through flaring and is nowhere near sufficient to generate energy. Only phases 1 and 2 were filled prior to 2004 and there was no limit on organic waste prior to this date, so there is some gas generated and that is actively collected and connected to the flare in the north-western corner of the site. This confirms no significant volumes of gas generated. Gas in the new areas (as for the current site) will be monitored in leachate monitoring and extraction wells. The wells will be designed for conversion to active extraction if that becomes necessary. The existing flare (or a replacement as needed) will be used if gas does need to be controlled. This has not been necessary for the phases post 2004 so is highly unlikely to be needed for the next stage. Whilst there is no	-

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		anticipated need, the Applicant does have the ability to manage gas if necessary with the components of the proposed development. The site permits already contains requirements regarding the control and monitoring of gas and emissions from flares including radioactive and nonradioactive components and this is likely to be continued to the western extension area.	
AGENDA ITEM 4 – AIR QUALITY, EMISSIONS AND NOISE			
a	Wind blown dust (EA response to Q2.3.4). The efficacy of the Dust Management Plan with particular regard to wind-blown dust.		The Applicant notes that the EA representative is not aware of any specific concerns.
b	Odour and noise effect on the Trust land to the north of the existing site, including the planning status of the proposed commercial/storage use, evidence of impacts beyond the site boundary and the sensitivity of likely receptors (Trust WR and Applicant response to D2 submission).	The Applicant has responded to the issues in the response to the submission from the Trust [**REP3-010**] and, as stated in this response, the Applicant is not aware of concerns regarding odour generated on the site, The Applicant does not accept the types of waste likely to generate odour (it is a waste acceptance procedure). No complaints regarding odour at the site have been received from neighbours or raised during visits from the EA. It is difficult to follow-up on an incident when it is not reported and no dates are given, it may not actually be due to activities of the site (for example, it could be agricultural activities causing the odour), but this cannot be investigated further without more detail. The permit does require an odour management plan. One is currently in place and this is anticipated for the western extension also. All wastes coming to the site go through a technical assessment process, which is based on chemistry to determine if the waste is appropriate. If, on arrival, the waste stream is found to be odorous, the Applicant can either immediately reject and send it away (which is done on occasion) or the Applicant can immediately dispose the waste and cover with additional cover material so that the odour is	

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		dealt with rapidly. If the Applicant receives a complaint about an odour and given information regarding when and where this is smelled, it is possible to investigate and determine if waste streams are causing the odour. The Applicant can look at wind speed and other factors and would look at other waste accepted during that day and determine whether it should reject similar loads in the future.	
AGENDA ITEM 5 – BIO-DIVERSITY			
a	The effect of the proposal on Collyweston Great Wood SSSI, including linkages to Fineshade Wood and the Trust's concern regarding a proposed bund on the woodland edge (Applicant and NE responses to Q3.2.1 and Q3.3.5 and Trust WR).	There was a lot of consultation with a number of parties who were concerned about linkages between the two woodlands. The Applicant identified the opportunity to create linkages from the outset. Some thought these linkages already existed and could be damaged. The Applicant has undertaken extensive surveys around the edges of the woodland, across the area [the western extension] and particularly along the hedgerows. The results of the surveys show that linkages are very limited. The results of the surveys are discussed in Section 5 of the ecological impact assessment [**APP-087**]. The diversity of invertebrates is highest at the woodland edge. The habitats along the hedgerow itself are of poor value for invertebrates. This highlighted the importance of a woodland edge strip around the end of the northern field of the western extension site. There are amphibians present around the ponds in the two woodlands but very little presence in the agricultural areas. It is unlikely that the two populations are connected due to the distance across the western extension site. In terms of adders, only one has been found three times in the same place on the western end of the hedgerow. Slow worms and lizards are present along the eastern edge. Any use of the hedge was in grass strips along the hedge – that is an important part of the mitigation strategy. There is a higher concentration of bats along the hedge line, but as they are mobile it is considered that they are resilient to the changes proposed. An important part of the proposals is the enhancement of the grassland strip along the west and north edges, (see ES, appendix 5.4.13.1 [**APP-087**]) which is species poor. The eastern side is far more rich where the invertebrate records were found. We are starting from a point of low linkage. The Applicant proposes to create and enhance the linkages that are there already. There is a proposed 10m grassland strip around the edge of the development and then the channel	The Applicant notes that the Trusts advisor withdrew the comments regarding the proposed bund as there was a misunderstanding.

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		proposed to cross the development would include the installation of two double hedgerows on grassed banks. Because grass is the most important ecological element, benefit would be achieved within about one season, so the habitat would end up better than it started even before excavations begin. Further immediate enhancement would include creation of hibernacula and placement of deadwood around the edge. The Applicant would only remove enough hedgerow to enable access to the areas. One of the key principles embedded in the design of the scheme is that we plant as much as possible as soon as possible and remove as little as possible for as long as possible so that the overlap for ecological loss is minimised against gain. The Applicant would expect to begin to establish grass and woodland through patch planting within 5-7 years – but this could be earlier. That would further provide linkages right across the area. It is a standard approach to restoration for woodland not to densely plant trees but to plant in patches, across years to create structure and diversity of age and allow a more biodiverse finish. Over time this will improve linkages between the two woodlands either side of the site.	
	The ExA queried implications of the mowing regime and access arrangements.	So long as mowing is done at the right time of year (late July) there should not be an adverse impact. The land won't be manicured grassland, but mowing will prevent scrub species. That is a typical hay meadow arrangement so it is entirely appropriate to that sort of habitat. Question of whether there is grazing on land in future is matter for various plans as they evolve during the life of site. Mowing can be easily delivered but wouldn't prevent potential for grazing in future. In terms of public access this is not incompatible with grazing, as with any other field with a public footpath running through it. The path would potentially be fenced depending on the type of animals that were grazing. The Applicant will consider mowing where it would prefer people walk and where people make footpaths, to ensure ongoing access is possible.	-

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b	Protected species licencing, including update on the Great Crested Newt licence application (Applicant and NE responses to Q3.4.1).	The Applicant made the application in June last year. There was some confusion when the response was received in December. The Applicant has recently re-made the application. The Applicant believes it should be possible for NE to provide a LONI by early June (around Deadline 6). However, that is in the hands of NE. The Applicant is not applying to move any ponds, it is just to ensure that where any animals are foraging on the land, they will be protected. The Applicant is essentially just moving the species to external areas of site. The Applicant has met requirements for licensing previously and can maintain the population at favourable status. For more difficult situations such as moving ponds and water bodies, the Applicant recognises NE need to go through the proper processes. There is no material change in policy to create a barrier to obtaining such licence in this instance. The Applicant did explore the DLL process but is now seeking the standard process for a licence.	-
c	Invasive Species including whether there is a need for an Invasive Species Management Plan (Applicant response to Q3.3.3).	The response to written question 3.3.3 [**REP2-006**] cross-refers to the Wildlife and Countryside Act 1981 (WCA) and the controls in place. The Applicant can certainly come back and make specific reference to the section referred to and look into whether controls need to be contained within DCO itself. Requirement 4 does secure the inclusion of how invasive species will be managed at R4(3)(c) – this scheme requires management of invasive species. This relates to pond aquatic species. Japanese knotweed is managed pursuant to the requirements of the WCA.	The dDCO specifically requires the phasing landscaping and restoration scheme to address how invasive species will be managed at R4(3)(c), the Applicant is of the view this an adequate level of control and there is no need for a separate plan to be prepared.
d	Potential Wildlife Site (ES paragraph 3.1.11). Update on the designation of parts of the existing site, the western extension land	The Applicant's understanding of this designation mirrors that of NNC. It was an aspiration in the early 2000s and has not been followed through. Only a tiny part of the western end is affected. Within the landfill site itself, the Applicant has established an area of species rich grassland. The scrub on the south-eastern part of the northern field, will be affected by the development, is the only a small part. The impacts are described in the Arboricultural report [pg 289, Appendix 2,	The Applicant notes the confirmation from NNC that there has been no assessment on the suitability of these sites for designation since they were first identified in the early 2000s

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	together with adjoining land as a Potential Wildlife Site.	3.3.4 **APP-087**] and in the LVIA chapter re landscape impacts Table under paragraph 7.8 pg 79 **[APP-088]** .	
e	Bio-diversity Net Gain. Including the timeframe for realising the proposed net gains in bio-diversity. (Applicant responses to Q3.3.4 and Q3.3.7 and response to D2 submission, Trust WR).	No submissions made.	The Applicant notes the Trust's acknowledgement that biodiversity gain is more front loaded than initially perceived and their welcoming that that grassland strip is coming forward in season one prior to commencement of landfill construction operations.
AGENDA ITEM 6 – WASTE MANAGEMENT			
a	The waste hierarchy. Performance indicators for the waste treatment and recovery facility (Applicant's response to Q13.1.1).	The waste treatment facility has the opportunity to manage waste to be moved further up the hierarchy. Disposal is the bottom rung of the hierarchy however the need for disposal of residual waste is recognised in the NPSHW. The application of the hierarchy occurs at an earlier level than waste arriving at the gate. The potential to increase recovery opportunities is an important part of the permit variation application for the treatment facility and additional recovery activities are included in that application. The operation of the ENRMF facility is in the context of the Augean network of facilities. Any waste enquiry by a waste holder is considered by the Augean sales and technical team and the waste is directed to the most appropriate route taking into account the waste hierarchy (for example, oily wastes are sent to the Avonmouth facility for recovery). Notwithstanding that, getting permission to carry out recovery activities is one thing, having appropriate uses available for the treated outputs is specific to the type of waste and the type of recovery therefore may not always be available for the wastes which are being treated. Opportunities for recovery are very much	The Applicant has collated the available information and provided this at Deadline 4 [Annex C Document reference 11.3].

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		sought wherever they can be, both on behalf of the producer, and also on behalf of the specialisms that exist within the Augean network of facilities to direct wastes up the hierarchy whenever they can. Waste producers are generally very aware of this requirement and many of them include this in their Corporate and Social Responsibility (CSR) reports. Some Augean company-wide information is included in their CSR reports but this is information at a broader scale rather than specific to this site.	
b	Destination of the excess clay to be exported from the site	As explained in the ES (para 5.4.4) **[APP-049]**, clay and other suitable materials will be exported from the site to the nearby Augean landfill site at Thornhaugh as there is a requirement for clay for use in the construction of the engineered lining system. Any remaining clay and overburden will be exported for general sale and use. The destinations for the exported clay and overburden vary over time depending on the location and status of other development activities in the vicinity, opportunities are taken as they arise. A recent destination (other than Thornhaugh LFS) is at Whittlesea near Peterborough where the material was used as engineering fill in a road building project. Other similar development opportunities are anticipated to arise regularly (roads, housing, commercial) and their progress/timescales are monitored. Discussions are ongoing with operators of mineral extraction facilities where the use of material including clay and overburden is needed to achieve the restoration of the extracted sites. That will continue with the extension area.	-
7 – WATER ENVIRONMENT			
a(i)	Swallow hole (Applicant and EA responses to Q14.1.2, Applicant response to Q14.2.7 and D2 submissions, Trust WR): Update on any discussion between	Talking to the plan shared on screen **[AS-006]**, in general terms contact has been made with the Trust through various consultants and there have been previous ongoing discussions. The Applicant has not yet had the opportunity to get feedback from the Trust on its response to written question 4.1.2 in Table 6 **[REP2-005]**. The Book of Reference **[APP-020]** also sets out the plots. Plot 11 in Book of Reference is the yellow land shown on this plan owned by the Trust. Inset 2 depicts the orange and yellow area, next week when the site visit takes place, the ExA will see the existing fenced off area representing the depression around the swallow hole. This is there for health and safety purposes. That fenced	-

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	the Applicant and the Trust regarding land ownership at the swallow hole;	off area, in terms of the orange land, indicates the extent of swallow-hole depression owned by the Howards and which the Applicant holds the Option for. The yellow land represents Trust ownership. In terms of other items shown, the land has more recently been surveyed by the Applicant and the dotted line separating orange and yellow areas identifies the delineation. On site the ExA will be able to see where that appears. The plan also shows a point marked 'X' on the orange land to the north. Following survey work done post-submission, the point of discharge has been identified and the point 'X' is marked on the plan for those purposes. That falls within the extent of the orange land and is owned by the Howards. The Applicant's position remains that we don't believe there is a need for any express rights to continue to use the swallow hole at that point of discharge as falls within the ownership of the Howards. The boundary is demarcated. When on site, the ExA will be able to see the yellow area is part of slope going down into deeper section of swallow hole. The ExA might also be able to hear water trickle down to that deeper area of the basin on the Applicant's side of the boundary.	
a(ii)	Existing and proposed catchment areas and discharge rates to the swallow hole;	Looking at **[APP-110]** – Appendix DEC F of that document; can also be found at **[APP-095]** (pg 35), which was shared on screen. The LIDAR data contours show the ground elevation in areas surrounding the site and at the application site. The land falls from north to south towards the area where the swallow hole is, and the scrubland area. The central and northern sections of the ground in southern area of site falls towards that point also. It can be seen from the ground elevations to the west of the site that the land is falling towards the extension area from the south west towards the swallow hole and also in the north, the land is falling from the west side towards central swallow-hole area. Close to the western boundary, there are further depressions that are part of a doline area, which can be followed from west to east through the scrubland, and also areas to the east of swallow hole which are depressions. Surface water that runs off or that is draining via field drains to those lower points will collect in the depressions, and because they are hollows, the water will not continue to flow	The Applicant notes the EA's comment that, on the basis of the information that Augean and MJCA have provided, the EA may need their catchment boundaries redrawing because these currently don't take account of sub-catchment features such as discharge to groundwater. The EA stated that they agree with the information presented by the Applicant and came to that same conclusion upon revisiting this information shortly in advance of the Hearings.

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		because any surface water accumulating will either take a direct pathway into the swallow hole or infiltrate down through the base of the depressions. Moving to Figure 3, the next figure [**APP-095**], shows the area to the west of the site, which quite possibly drains to those depressions to the west of the site and then have a swathe going northwest towards the swallow-hole both on and offsite. There is also an area in the northeast of the section which will drain to the perimeter drainage ditch. Part will drain to the swallow hole, but the rest will drain to the east of the site. This shows the pre-development catchment areas. Those areas are presented in tables 1 and 2 of surface water management plan [**APP-095**]. Table 2 is offsite and table 1 is the site situation. Table 1 compares pre and post development catchment areas. The Applicant confirms that the blue lines represent the EA's published catchment areas. The line crosses the current site, splitting in to the northern and southern area: Wittering Brook catchment and Willow Brook catchment. Based on definitions any surface area in northern area would drain to Wittering Brook. Moving to Figure 1, if you look at the A47 on the eastern side of the plan, it may be possible to make out a valley feature and just to the east is where the valley brook can be seen. The idea is that all land will drain and end up feeding into the brook at that location. Anything to the south of the blue line drains towards the Willow Brook and tributaries to the Willow Brook. A 'V' shaped tributary, the beginnings of two streams, these tributaries join and flow south through Kingscliff to join the Willow Brook. Any surface water would flow towards those valleys and into those surface watercourses and on to the Willow Brook. The areas we were looking at in more detail, would be shown in the EA defined catchment to issue into Wittering Brook. The Applicant has hopefully managed to demonstrate through topography and knowledge of site that areas to west and east of swallow hole enter into groundwater which flows north to south and will issue in tributaries joining the Willow Brook or to the Willow Brook from the groundwater beneath the site. The fact that topography falls to those depressions means water can infiltrate down to groundwater and this generally flows from north to south. That figure is presented in the permit application documents at figure HRA 5. The HRA is presented at [**REP2-009**].	

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		Figure HRA 5 on page 81 of **[REP2-009]** shows that, generally, groundwater flows from north to south. There is an element of westerly flow but in general north to south. Any groundwater entering groundwater in the central area of the site would then be flowing to the south, which is where the Willow Brook and not Wittering Brook is located. On Figure HRA 5, the pink figures are the groundwater level recorded at boreholes. The circles next to pink numbers are boreholes drilled into ground through geology and have monitoring stand pipes in them and can monitor the level of groundwater beneath the site. Contours of those levels have been created to help see that levels are higher in North (higher in northern area) at 70mAOD and flow down to the south where groundwater levels are down at 61mAOD. This shows groundwater flows from the northern area to the southern area of the site and on to the Willow Brook. In terms of groundwater flow, in the permit application ESID document, Appendix F [Page 72 of **REP2-008]** shows groundwater contours from the EA which are roughly consistent with what the Applicant has shown.	
a(iii)	Implications for the surface water drainage strategy if proposed discharge to the swallow hole was prevented or reduced	In terms of the legal position, the point of discharge and extent of ownership of the depression is clear although the Applicant notes the Trust may want to verify the survey work that has been carried out to date. However, in terms of other rights required, this will be covered off as a discharge point in the permit. This will all be covered off in discussions with the EA regarding the permit itself. The Applicant does not believe there is a need to encroach or require additional rights from the Trust. The proposed strategy is to mimic the existing drainage that takes place as far as possible, but it would be possible to agree an alternative drainage point with the EA to the swallow hole if a property dispute arose. The Applicant has had discussions on that. The alternative would be to create some soakaways on the Applicants' side of the boundary in an area currently occupied by scrubland, it would be developing further soakaways in that area to mimic discharge in the swallow hole. However,	-

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		ideally the Applicant would keep discharging to the swallow hole so that as little change as possible is caused, which accords with EA Guidance. The current dDCO, works plans and surface water management plan would permit an alternative arrangement to be implemented if necessary, so no change to the scheme would be required.	
a(iv)	How has the existing volume of discharges to the swallow hole been assessed so as to provide a meaningful comparison with the proposed discharge?	The way the surface water management plan design is undertaken is that the Applicant reviews the drainage as it occurs pre-development and carries out an assessment of the greenfield run off rate for that land looking at the catchment as defined in the plans [Figure 3] and Tables 1 and 2 of the surface water management plan [**APP-095**]. The greenfield run off rate is based on a mean annual flood event which is the amount of water to be dealt with in an average year. It is a high level calculation; relatively simplistic but a standard part of national and local guidance. The calculations use site specific information on catchment areas, soil types and local rainfall data. The Applicant has reviewed how much water is discharged regularly at discharge points identified on site. The swallow hole is one of those discharge points. There are also areas draining to the perimeter ditch at the east and towards the south. The Applicant has reviewed and calculated the run-off rate. These calculations are presented in Appendix D of the surface water management plan. Table D4 shows the results of those calculations showing a mean annual flood discharge to those locations based on the simplistic method. There are two methodologies to use – the IOH method for small catchments which is well known to underestimate discharge rates. The FEH statistical method is an alternative. Guidance states that when looking at this, one needs to use calculated greenfield run off rate or 2l/s/ha, whichever is larger. The 2l/s/ha is larger than the results of the calculations using the IOH method, slightly smaller than the FEH statistical method so the Applicant has used this to help design the Surface Water Management Scheme so a conservative number (ie worst case) is being used in the design of the development. The Applicant has chosen the conservative approach based on guidance to include allowance for variations and to satisfy people who are technically reviewing the application that all has been taken into account. Looking at the design for the site, the Applicant works out the	-

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		different catchments to mimic the areas draining to those identified discharge points; this is similar to pre-development catchment areas. Therefore, drainage should be similar and the design only allows discharge from those catchments at greenfield run-off rate. If any rapid runoff occurs this will be collected in a detention basins and it will be stored and only allowed to discharge from the basin at the greenfield runoff rate. This makes sure that post-development run-off will be similar to pre-development run-off to avoid any measurable impacts downstream. All proposed catchments within the site presented at Figure 5 are indicative for each of those areas, each catchment will have a detention basin and the water will drain down the slopes and into channels and will be held in the basins before being discharged to the perimeter ditches then the swallow hole, currently permitted discharge point or proposed discharge points to the east or south. The design is based on agreed principles but the detail is indicative at this stage, the drainage ditches will intercept the runoff and route the water to the storage detention basins. The design of these ditches will be subject of detailed design. The area of each catchment will drain to the storage area and water will only be able to exit that storage area at the greenfield runoff rate. The calculation for the size of basins required has been carried out to allow for a number of different storm event return periods up to the 1 in 100 year storm event allowing for climate change (Appendix E of Surface Water Management Plan). This is all in line with EA and LLFA guidance on principles of design and flood storage for these types of schemes and the latest EA climate change projections.	
a(v)	Potential implications of the proposed further investigation of the two culverts to the west of the swallow hole, including whether they drain land to the west of the site and	Further investigation is primarily to do with surface features rather than surface water drainage. The LIDAR data figures show the central section of the western land may drain to doline features on the western side of the order limits with surface water infiltrating into the aquifer. However, there is an element of land that does drain through the culvert towards the scrubland. The Applicant believes the southern culvert draining to the scrubland is currently blocked but the western boundary of the southern area does collect surface water from land to west of site and directs it towards the swallow hole.	We understand Mr Fiennes is the beneficiary of the Settlement and is represented by Berrys who are the land agent. A statement of common ground has been agreed with NW Fiennes and was submitted at Deadline 3 **[REP3-009]**.

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	the ownership of that land (Applicant response to Q14.2.7 and RR by the Trust including the plan at Appendix RRA).	As part of the investigations, if the land is disturbed, there will be some kind of temporary provision to ensure surface water can still reach the discharge point it needs to, to ensure the area of investigation will not impact water quality. The Applicant would submit proposals to the EA prior to undertaking the investigation which will include measures to minimise the potential impact to drainage around site while the investigation is carried out. In terms of land ownership further to the west, there are two landowners: the Forestry Commission have title immediately to the west and towards the south. In the Book of Reference they are listed as a Category 3 person (land held by SoS for Environment Food and Rural Affairs); the northern area of land is owned by the trustees of the AF Goddard Jackson (Duddington 1983 Settlement). There has been contact made with the Forestry Commission. They were consulted as part of statutory consultation and no further representations have been made as part of this process raising concerns over drainage as far as the Applicant is aware. There are lines of communication with the trustees of AF Goddard Jackson (Duddington 1983 Settlement). No issues have been raised around drainage. They have been made aware of the nature of the proposed development regarding changing of the landform and site. Legally, the Applicant is obliged to maintain that drainage across its land. The Applicant has had direct conversations with agents for land to the north west of the site. No issue has been raised related to drainage. The whole scheme is aimed at ensuring drainage flow through the land and the Applicant is not affecting their drainage at any point.	
b	Further ground investigation of the existing ditch running west from the swallow hole. Likelihood of the need for permanent de-watering feature and potential	There are proposals for a 20m or a 150m corridor running from the swallow hole northwest to the area of dolines just to west of application site to be maintained depending on the results of the further ground investigation. The purpose of that condition is because the Applicant has not yet carried out investigation and should further solution features be identified during the investigation, that corridor may need to be adapted such that those further drainage routes are maintained if necessary. A full survey in the scrubland has not yet been possible, because vegetation is so dense. A more detailed investigation will be carried out when the Applicant has access to do so. In terms of the area to the west of the scrubland in	-

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	implications for the design of the adjoining cells (Applicant response to Q14.1.9).	the application area, while there were a number of locations identified during the geophysical survey, the Applicant doesn't anticipate significant drainage routes in that area. In the scrubland area, the Applicant knows about the swallow hole the subject of previous discussions and the smaller swallow hole in line with the larger one in the scrubland but there is no indication of significant drainage. The access into that area will allow the Applicant to better understand how surface water may drain in that area to the underlining aquifer and that can be taken into account when designing the west to east crossing across the site. The intention of the investigation into the scrub area is to understand the underlying geological detail and the drainage better. There is potential for a much broader corridor in relation to the proximity to the boundary of the excavated landfill. The excavation currently is modelled as being based on a 20m corridor, following the further investigation, the hydrogeological risk assessment may identify that the landfill needs to stand off further from this area. If a greater standoff is needed for the landfill, this will not affect the restoration profile. If the width of the corridor between the areas of landfill has to increase, the surface restoration profile will remain the same as excavated overburden can be used to fill the non-landfilled area so that the restoration profile still is achieved. The potential increase to a 150m distance relates to the underground cell walls of the landfill rather than and change to the overlying restoration profile.	
	The ExA queried if the whole of the scrub area was all a doline feature, whether phase 1 would go ahead?	This phase would be constructed, but in a different shape, it is a deeper area (thickness of clay on top of the limestone) so in terms of void, there would still be a benefit to continue with landfill in that phase.	-
c	Proposed drainage channel to replace culvert, including potential for contamination during the operational	In summary, the Applicant recognises the importance of protecting the quality of water. The intent is not to create an open channel until all the landfill to the north is complete and the channel would be opened only once works retreat to the south. In terms of design and protection measures, the Applicant sees this as an	The Applicant has discussed this issue with the EA and it is addressed in the SoCG submitted at Deadline 4.

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	phase and the need for more detailed design (EA response to Q1.3.2, Applicant response to D2 submissions, Trust WR).	important feature of the Surface Waste Management Plan to be agreed with the EA as part of the permit. Phase 21 is adjacent and to the south of the proposed watercourse. Before operating in that Phase, the Applicant would need to agree the operational surface water management controls with the EA, these are likely to be more robust than usual because of the watercourse sensitivity and are likely to include both a bund and ditch. This would be agreed with the EA well in advance of exposing the length of the watercourse.	
d	Contaminated surface water. Does the dDCO provide sufficient control over the treatment of contaminated surface water prior to re-use? What effect would the use of untested contaminated water have on the processes undertaken at the treatment facility? (Applicant response to Q14.2.1).	There are three types of water the site is managing: 1. Clean mains water from a pipe; 2. Runoff water; and 3. Leachate extracted from landfill. The treatment processes are robust. Quality is not critical. The run-off water in the treatment plant area has the same contaminants as the waste materials being processed. If the process is sensitive to the contaminants present, testing would be done to ensure that the process effectiveness can be maintained. The treatment plant uses water to facilitate treatment. Once used in treatment it is incorporated in the residue and would be deposited in the landfill. Augean use leachate or contaminated water in preference for the processes because that is more sustainable than using fresh water. That is in the processes of stabilisation, future neutralisation and dust suppression at the waste treatment and recovery facility. Clean water is used for dust suppression around the whole site but on the treatment plant the Applicant would use contaminated water. All water on the treatment plant is contained and as this relates to pollution control, all matters of what can and cannot be used for which purposes are controlled under the permit.	-
e	Surface water receptors. Whether it is necessary to	At the time the ES was written in 2020, the EA catchment data explorer website did not have the level of detail it has currently. The detail it showed was the status regarding moderate and fail but did not give detail on classifications. It did have	A clarification on this point is included in the SoCG with the EA submitted at Deadline 4. [Document reference 9.3]

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	review the conclusions reached in the ES having regard to any change in the interpretation of the chemical/biological quality of surface water receptors as highlighted by the EA in its response to Q14.1.8.	reasons for not achieving good status and reasons for deterioration which were interpreted as the reason for chemical fail status in the ES. Now the information presented on the EA website is in more detail. The Applicant agrees with the EA comments. Regardless of these details the status of the water bodies is the same and cause of this is the same. The EA agree with the targets for the ecological and chemical status. In respect of the requirements for the Water Framework Directive the additional details on the EA website make no difference to the conclusions in the ES.	