

NON TECHNICAL SUMMARY OF THE ENVIRONMENTAL STATEMENT

FOR THE PLANNING APPLICATION FOR THE CONTINUATION OF THE LANDFILLING OPERATIONS AT THORNHAUGH LANDFILL SITE AND THE IMPORTATION OF CLEAN NATURALLY OCCURRING MATERIALS TO CREATE AN INTEGRATED RESTORATION LANDFORM WITH NATURE CONSERVATION HABITATS AT COOKS HOLE QUARRY AND THORNHAUGH LANDFILL SITE, LEICESTER ROAD, THORNHAUGH, PETERBOROUGH

Report reference: AU/CH/SPS/1774/01/NTS/FV February 2024



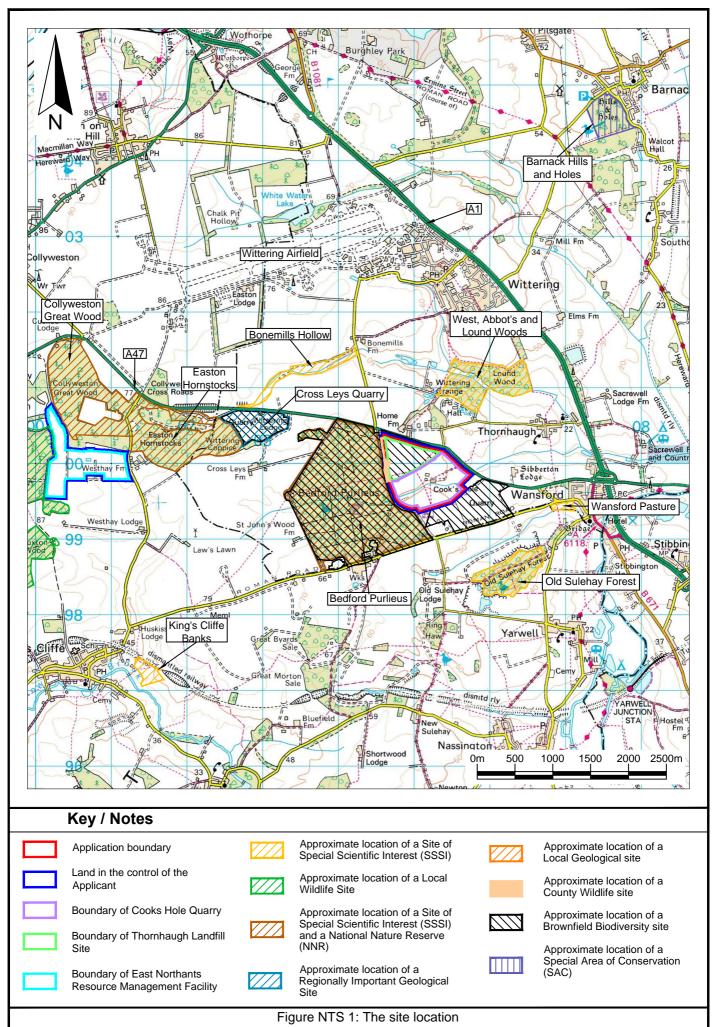
1. Introduction

- 1.1 Augean South Ltd (Augean) operates the existing Cooks Hole Quarry (Cooks Hole) and Thornhaugh Landfill Site (Thornhaugh). Throughout this report, when referred to together, Cooks Hole Quarry and Thornhaugh Landfill Site will be called 'the sites'. The location and boundary of the sites are shown on Figure NTS1 and lie approximately 1km south west of the village of Thornhaugh and 10km west of Peterborough. Access to both of the sites is from the A47 Leicester Road.
- 1.2 Augean is proposing to revise the restoration schemes for Cooks Hole and Thornhaugh to provide a single, integrated landform for both sites. The material that will be used to create the proposed landform at Cooks Hole will comprise clean, naturally occurring materials. Some of the additional void created at Thornhaugh will be filled with waste types already consented for disposal there.
- 1.3 The creation of the proposed landform at Cooks Hole and its integration with the restoration scheme for Thornhaugh will directly support the continued operation of the nearby nationally significant East Northants Resource Management Facility (ENRMF) by using the material that arises during the construction of the landfill cells at ENRMF.
- 1.4 The proposed restoration scheme would extend the habitats from Thornhaugh to Cooks Hole so that a wider mix of habitats is available across both sites. In addition there is the potential for the restoration to tie in with wider hopes for the enhancement of Rockingham Forest, to create green links with Bedford Purlieus and for the proposals to contribute to landscape scale recovery.
- 1.5 The sites have a complicated planning history and have been operated by a number of different companies since the 1950s. However the overall principle of the proposals is to restore the sites to a beneficial after use including public access. This report is a non technical summary of the Environmental Statement which has been submitted with the single planning application for the revised restoration profile for Cooks Hole and Thornhaugh. The activities in the planning application include the continuation of the mineral processing operations at Cooks Hole and the continuation of the existing waste management operations at Thornhaugh (the construction of engineered phases, landfilling and the processing of waste). It is proposed that the



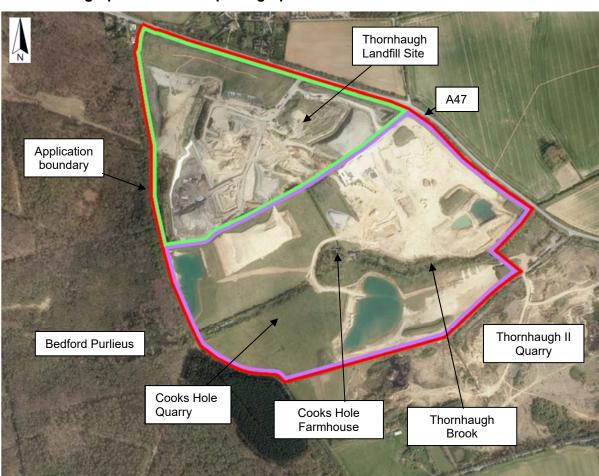
existing planning permissions will be replaced when a new planning permission is granted so that there is a clear, single consent for the whole application area.





2. Site location and description

2.1 The area of Cooks Hole is approximately 53 hectares and the area of Thornhaugh is approximately 30.5 hectares. The setting is generally rural with the majority of the land surrounding the site comprising agricultural fields, previous mineral workings or woodland as shown on Photograph NTS1.

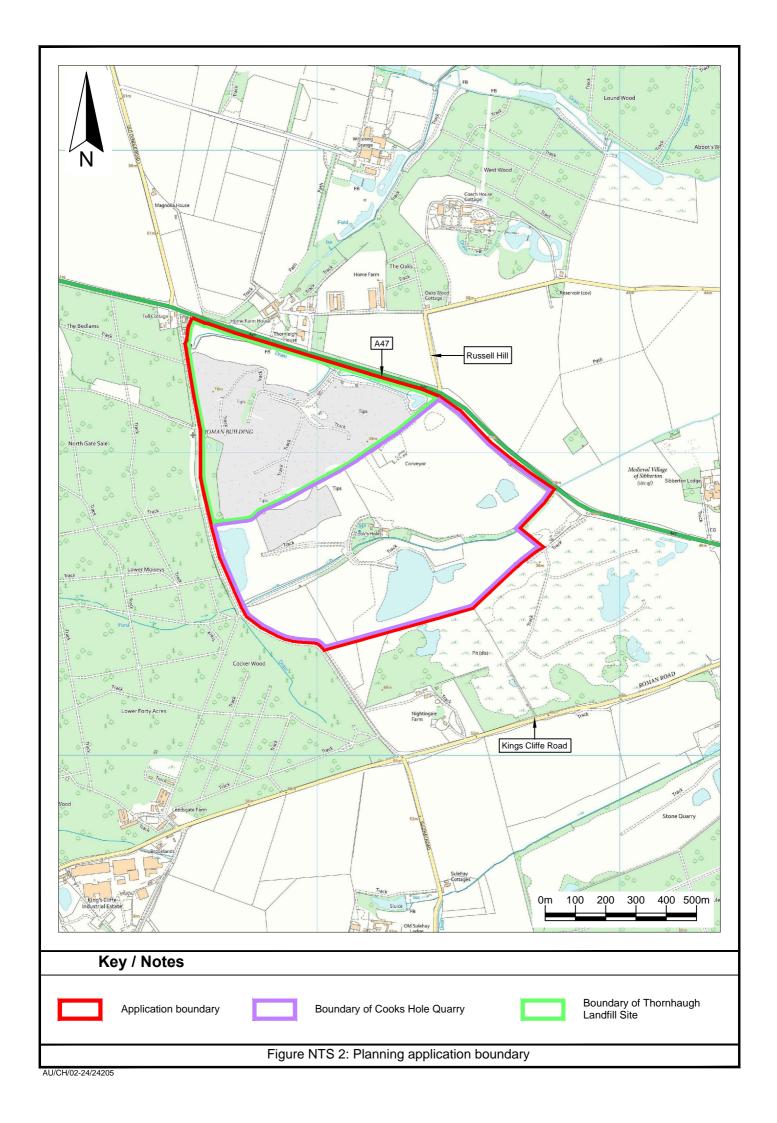


Photograph NTS1 Aerial photograph of the site taken in 2020

2.2 The mineral extraction operations are now complete at Cooks Hole and no further mineral will be extracted. There are a number of stockpiles of mineral materials and soils at Cooks Hole together with mobile plant which is currently processing the mineral material from the stockpiles as well as materials from the construction operations at Thornhaugh.

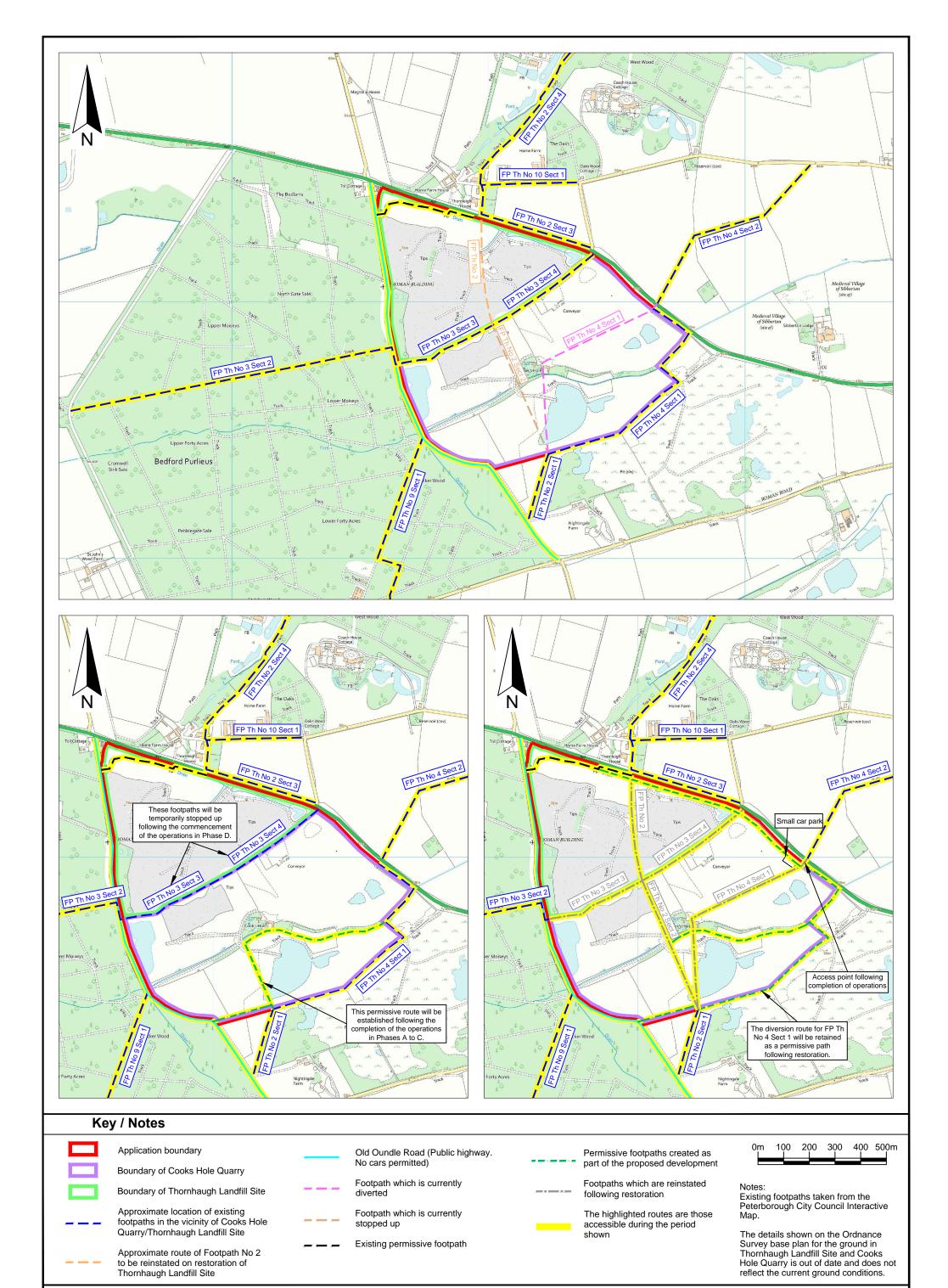


- 2.3 Thornhaugh is an active landfill site which is being filled with non hazardous waste and stable non-reactive hazardous waste. Some of the landfilled areas are completed and restored or partially restored. A surfaced access road, site reception and welfare facilities, a weighbridge and wheel wash, landfill gas flare, container storage area and car parking areas are located generally in the centre of Thornhaugh. The access to Cooks Hole is to the east of the site entrance.
- 2.4 Cooks Hole Farmhouse and outbuildings are within Augean's ownership. They are located in the centre of Cooks Hole next to Thornhaugh Brook which runs through the site from west to east. The buildings are surrounded by dense vegetation at present. The property has been uninhabited for some time and is uninhabitable in its current state. Cooks Hole Farmhouse is a Grade II Listed Building. Beyond the sites there are three Grade II listed buildings to the north of the sites, the closest being Home Farm House approximately 80m from Thornhaugh and 540m from Cooks Hole. There are also four listed buildings located to the east of the sites. Sibberton Lodge is a Grade II* listed building which is approximately 495m from Cooks Hole and 940m from Thornhaugh. Sibberton Lodge is surrounded by four Grade II buildings which include a barn, a cottage and stables.
- 2.5 The nearest residential properties to the sites which are not listed are located to the north of the A47 Leicester Road and include Thornleigh House (45m from the boundary) and Bedford Lodge (70m from the boundary). Toll Cottage is located approximately 40m north west of Thornhaugh. Oaks Wood Cottage is located approximately 290m to the north of the sites and beyond the A47 Leicester Road. Nightingale Farm is located approximately 335m to the south of Cooks Hole. Leedsgate Farm is located approximately 630m south west of Cooks Hole Quarry (Figure NTS2).
- 2.6 There is a network of Public Rights of Way at and in the vicinity of the sites as shown on Figure NTS3. Thornhaugh Footpath No 2 Section 2 which ran generally from south to north through the centre of Cooks Hole is currently stopped up. The diversion of Thornhaugh Footpath No 4 Section 1 and the stopping up of Thornhaugh Footpath No 2 Section 2 are expected to remain in force until 2042. Thornhaugh Footpath No 2 which ran through Thornhaugh is currently diverted to follow Thornhaugh Footpath No 3 Section 4. The Public Rights of Way in the vicinity of the site including the original routes, diversions which are in place now and which will be in place during



the proposed operational period, and the potential new permissive footpaths which will be constructed as part of the proposed restoration are shown on Figure NTS3.

- 2.7 Barnack Hill and Holes Special Area of Conservation is located approximately 4.5km to the north east of the sites (Figure NTS1). Bedford Purlieus located adjacent to the western boundary of the sites is designated as an ancient woodland, a Site of Special Scientific Interest (SSSI) and a National Nature Reserve. Several other SSSIs are located in the vicinity of the sites but are located more than 500m from the sites. Phase 4A of Thornhaugh, which is located at the western boundary, is a designated County Wildlife Site as it supports amphibians including Great Crested Newts. Thornhaugh, Bedford Purlieus and Thornhaugh II located to the south of Cooks Hole are designated as brownfield biodiversity sites. Cross Leys Quarry to the west of Thornhaugh is also designated as a brownfield biodiversity site.
- 2.8 Thornhaugh is located in Flood Zone 1. Flood Zone 1 is defined as land having a less than 1 in 1,000 annual probability of river or sea flooding. The majority of Cooks Hole is also located in Flood Zone 1 except a small area in the vicinity of Thornhaugh Brook which is in Flood Zones 2 and 3. Flood Zone 2 is defined as land having between a 1 in 100 and a 1 in 1,000 annual probability of river flooding. Flood Zone 3 is defined as land having a greater than a 1 in 100 annual probability of river flooding. This means that all of the site, except the area next to the Thornhaugh Brook, has a low probability of river flooding.



3. The proposals

- **3.1** The main elements of the proposed development are summarised below:
 - The continuation of landfilling at Thornhaugh with non hazardous waste and stable non-reactive hazardous waste at a rate of up to 120,000 tonnes per year. No new landfill cells additional to those that are already permitted will be consented as a result of the proposed development.
 - Continuation of the extraction of mineral to facilitate the construction of the permitted landfill cells at Thornhaugh.
 - The continuation of stockpiling of clay materials imported to Thornhaugh for use in landfill engineering operations.
 - Amendment of the restoration profiles for Thornhaugh and Cooks Hole to form one single integrated landform.
 - Continuation of the use of the existing Thornhaugh access from the A47 for the importation of waste for deposition at Thornhaugh, material for use in landfill engineering at Thornhaugh and material for use in the restoration of Cooks Hole.
 - The importation of in the order of 1.2million m³ of clean, naturally occurring excavated material from ENRMF to create the landform of Cooks Hole and to tie in with the landform at Thornhaugh. On average approximately 80,000m³ of material will be imported per year from ENRMF.
 - There will be no increase in HGV movements associated with the proposed development compared with the consented operations.
 - The placement of restoration material and restoration of completed areas will be carried out in a phased manner.
 - The continuation of processing of materials from mineral stockpiles at Cooks Hole and processing of minerals from the construction of the landfill cells at Thornhaugh.



- The continuation of crushing and screening of imported soil forming materials and minerals from the construction operations at Thornhaugh. It is anticipated that up to 28,000 tonnes of material will be imported per year.
- The continued extraction and redeposition into engineered containment cells of historically deposited waste from Phases 1 and 2 at Thornhaugh as consented by the Environmental Permit for the landfill site.
- The continuation of the export of up to 10,000 tonnes per year of material from the recycling, recovery and waste processing operations for reuse or disposal at an appropriate facility.
- As is the case currently, during the operation of the sites haul roads will be constructed as necessary.
- As is the case currently, during the operation of the sites the site reception facilities
 including the welfare facilities which are located in portable cabins will be relocated
 as necessary to accommodate the phased activities.
- As is the case currently, the retention of the site management infrastructure at Thornhaugh for the continuation of monitoring and the management of landfill gas and leachate.
- The retention of Cooks Hole Farmhouse and the associated outbuildings for the duration of the operations at the sites. Proposals for the future use of the listed building and associated outbuildings will be the subject of a separate planning application.
- Continuation of the operations at the sites until the completion of restoration by 21 February 2042.
- During the operation of the sites, surface water runoff will be managed in a manner similar to that implemented currently at Cooks Hole and will continue to be managed in accordance with the Environmental Permit at Thornhaugh.
- A surface water runoff management system will be constructed as part of the restoration landform at the sites.



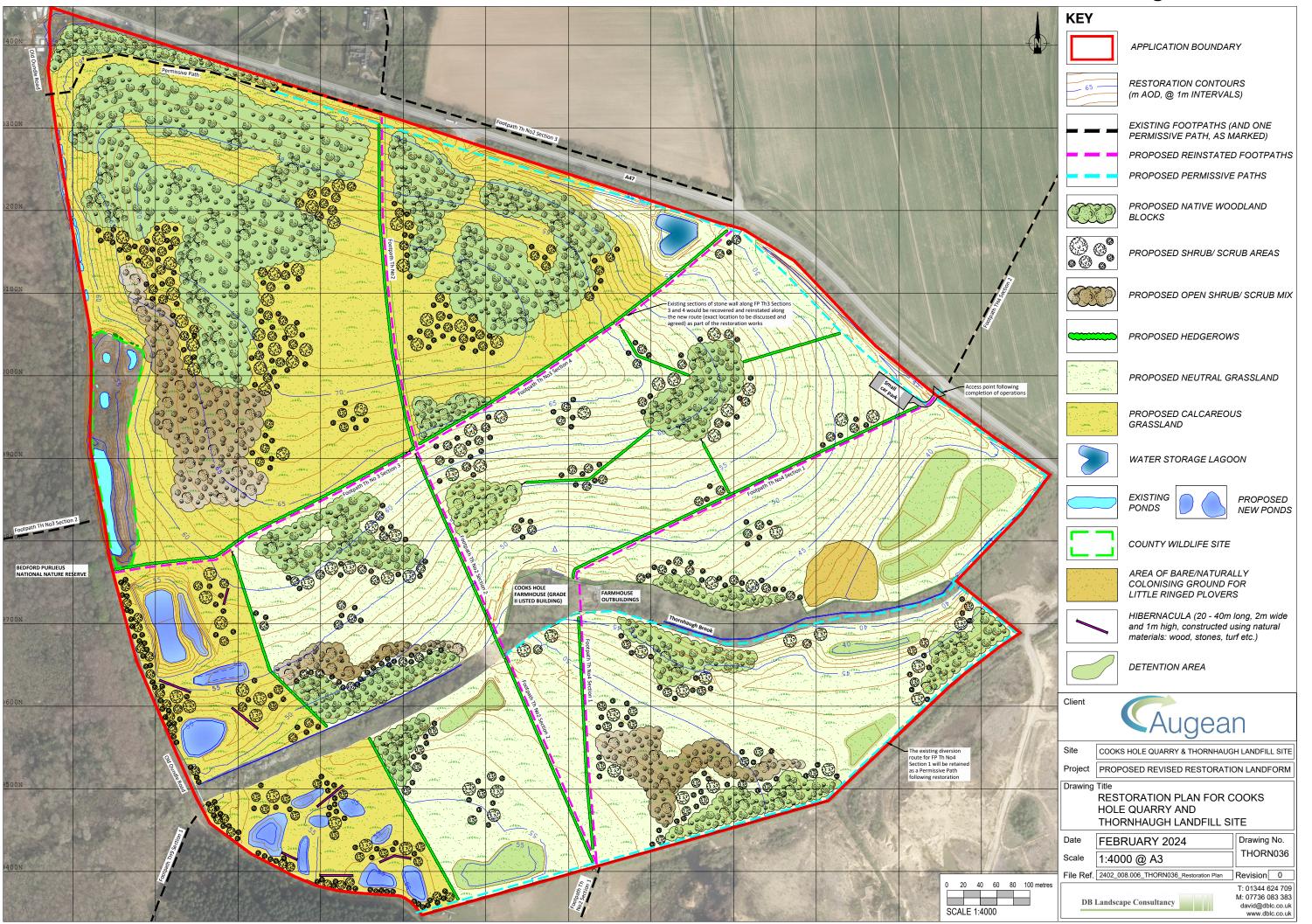
• The sites will be subject to an aftercare and maintenance period following the completion of restoration. The length of the aftercare period will be 30 years.

Restoration and biodiversity net gain

- 3.2 Discussions have been held regarding the restoration scheme with Peterborough City Council ecologists, Rockingham Forest Vision and Natural England. Restoration of the sites will be to nature conservation interest and the habitats currently included in the approved restoration scheme at Thornhaugh will be extended to the south to include and be integrated with Cooks Hole. The habitats that will be established at Cooks Hole include ponds, woodland, shrub and scrub, open scrub, hedgerows, calcareous grassland and neutral grassland together with areas for hibernation shelter and areas of bare ground. The habitats at Thornhaugh will remain the same as those that are currently consented which is a mixture of woodland, hedgerows, shrub and scrub and calcareous grassland.
- 3.3 The revised restoration scheme for Cooks Hole will deliver a significant increase in biodiversity (biodiversity net gain) as a result of improved habitats and more hedgerows (over 100% gain) compared with the previously consented restoration scheme. The restoration plan is shown on Figure NTS4.
- 3.4 Public access to the restored sites is included as part of the restoration scheme. A number of rights of way which have been diverted historically will be reinstated across the restored sites and a number of new permissive paths will also be established to provide circular walks around the site. A permissive path will be established next to the A47 so that walkers can walk inside the boundary of the sites rather than on the highway verge (Figure NTS3).
- 3.5 A small car park for up to 12 cars will be established at the former Cooks Hole entrance following the restoration of the site to encourage access to the footpaths. It has been demonstrated that an access can be re-established at this location with appropriate visibility splays for cars joining the A47.



Figure NTS 4



4. Need and alternatives

Need

- 4.1 Approximately 40% of the wastes deposited at Thornhaugh landfill currently are treatment residues generated at the ENRMF treatment facility which is also operated by Augean. In addition, suitable engineering clay materials arising from the excavation works as part of the construction of landfill cells at ENRMF are transported to Thornhaugh and used in the construction of the engineered low permeability seals to the landfill cells at Thornhaugh.
- 4.2 Hazardous waste treatment and recovery facilities and a hazardous waste and low level radioactive waste (LLW) landfill are located at ENRMF. The ENRMF site is defined as a Nationally Significant facility and serves in particular the West Midlands, East Midlands, East of England, South East and Greater London areas. The current operations at ENRMF and the current operations at Thornhaugh are closely linked due to the inputs of treated wastes to Thornhaugh from the ENRMF waste treatment facility.
- In order to support the continued nationally significant operations at ENRMF it is necessary to export 1.2 million m³ of naturally occurring clean excavated material from ENRMF. The movement of materials arising from construction excavations is not economical over anything other than short distances. Extensive enquiries over the last 5 to 10 years for developments which might need the material for construction or fill purposes have only identified an appropriate need within a cost-effective distance for a small volume of the arisings. Excess material excavated to date is stockpiled at ENRMF and there is a risk that if it is not used in the near future its continued presence will begin to affect the ability of the site to operate effectively. The ENRMF therefore requires a nearby, confirmed and available route for the entire volume of material which has been excavated and will be excavated in order for the development to be able to continue.
- 4.4 The export of material needs to be undertaken on a continual basis to allow the continued construction of the landfill cells in the western extension of the ENRMF. As Augean also own and operate Cooks Hole the material can be transferred to Cooks Hole to create the proposed landform as needed and there is only a short



distance between the two locations. Without the material being used at an alternative site the operations at ENRMF could be delayed and the provision of a nationally significant waste management facility would be prevented due to the practical and planning restrictions on stockpiling on site while the construction, treatment, disposal and engineering operations are all taking place in parallel.

Alternatives

- **4.5** Alternative options to the proposed development were considered. The alternative options included consideration of the alternative uses for the materials arising from the construction of ENRMF and Thornhaugh and alternative site restoration designs.
- 4.6 The alternative uses for material from ENRMF in other projects is sensitive to distance and timescales. The material needs to be relocated from ENRMF regularly to allow the construction operations in the western extension to continue without restrictions and in accordance with the timescales that have been set out in the Development Consent Order. The movement of materials arising from construction is not economical over anything other than short distances. Whilst alternatives have and will continue to be investigated there is no guarantee that projects will arise within a suitable distance or timescale during the construction operations of the western extension at ENRMF. Without the material being used at an alternative site the operations at ENRMF could be delayed and the provision of a Nationally Significant Infrastructure Project would be prevented due to the practical and planning restrictions on stockpiling on site. Whilst material arising from the landfill construction operations at ENRMF could be exported to an inert waste landfill for disposal it would be filling up the landfill void that should be being used for the disposal of inert wastes rather than excavated naturally occurring materials.
- 4.7 As consultation responses have been received and the details of the proposed development have evolved, the landform profile has been amended to accommodate only the volume of material that will arise from the construction operations at ENRMF and the construction operations at Thornhaugh in Cooks Hole. The additional void created at Thornhaugh has resulted from tying the two landforms together in order to provide a single landform.



5. Environmental issues

- An Environmental Impact Assessment (EIA) of the effects of the development on people and the environment was carried out by technical specialists. The scope of the EIA was agreed with Peterborough City Council. It was agreed that assessment of the potential effects of the proposed development associated with population and human health, soils and agricultural land quality, buried archaeology, vibration, traffic noise, traffic air quality, groundwater and major accidents could be excluded from the scope of the Environmental Statement as the impacts associated with these aspects are not affected by the proposed development. The results of the agreed assessments are reported in the Environmental Statement and a summary of the findings is presented in this document.
- 5.2 The existing operations at Thornhaugh are authorised and regulated by an Environmental Permit. The landfilling and waste processing operations will be located within the Thornhaugh permit boundary and will be undertaken using appropriate mitigation and monitoring measures as specified in the Environmental Permit which will continue to be regulated by the Environment Agency.

Ecology and biodiversity

- Extensive ecological surveys were undertaken at the site and an ecological impact assessment for the proposed development was prepared. Surveys have been undertaken for habitats and plant communities, invertebrates, amphibians, reptiles, birds, bats, badgers, brown hare and hedgehogs. A tree survey was also undertaken. Following the review of the data obtained during the desk study and preliminary surveys at the sites a number of species were scoped out of the impact assessment as the surveys determined that they were unlikely to be present at the sites. These are water vole and otter, hazel dormouse, brown hare, hedgehog and white clawed crayfish. A Biodiversity Net Gain assessment for the proposed development has been carried out to determine the increase in biodiversity which will be achieved compared with the currently approved restoration schemes.
- **5.4** The following aspects of the Sites were identified as being ecologically important features:



- The wet woodland that will be retained in the brook corridor in Cooks Hole (this
 area provides feeding areas and shelter for a range of priority invertebrate
 species).
- The collection of amphibians on site including Great Crested Newts.
- Little ringed plover, red kite and the collection of breeding birds present at the sites.
- The habitats present on site provide feeding areas and shelter for a range of priority invertebrate species including two species of butterfly.
- The hedgerow network present at the sites supports a range of priority species by providing feeding areas and shelter.
- The collection of bats and reptiles.
- The proposed development will be undertaken in phases. This means that replacement habitats for those that will be lost during the development are included in the restoration proposals and new habitats will be created at the same time that other areas are being disturbed. The proposed restoration will create a mosaic of woodland with shrubby edges, neutral and calcareous grassland, scattered trees, a network of hedgerows, ponds and areas of open mosaic habitats. The proposed restoration will provide new and improved links to existing habitats and will extend the capacity of Bedford Purlieus to support notable species. This will contribute to the conservation aims of Nature Recovery Networks within the wider Rockingham Forest area. The proposed new and extended habitats will generate significant improvements in biodiversity at the sites (Biodiversity Net Gain) which is far greater than the legal requirement under the Environment Act 2021.

Cultural heritage

An assessment of the potential impacts on the setting of heritage assets was undertaken. There are no scheduled monuments, World Heritage Sites, conservation areas, historic parks and gardens or historic battlefields within 500m of the sites. There are three listed buildings within 500m of the sites which are Cooks Hole Farmhouse located within Cooks Hole Quarry, the Home Farm group of buildings



located approximately 90m north of Thornhaugh and the Sibberton Lodge group of buildings which are located approximately 500m east of Cooks Hole. Both the Home Farm and Sibberton Lodge groups of buildings are enclosed by mature planting which screens the properties from the sites. There is additional planting on the boundaries of the sites which obscures the operations at the sites. Cooks Hole Farmhouse is situated in the Thornhaugh Brook valley and is set below the surrounding ground levels. The views of Cooks Hole Farmhouse are limited due to the surrounding planting and ground levels.

- 5.7 There will be no direct impacts on designated heritage assets as a result of the proposed development. There will be no impact as a result of to the proposed development on the setting of designated heritage assets outside the application boundary due to the intervening vegetation and road infrastructure.
- There will be minor adverse impacts on views from Cooks Hole Farmhouse during restoration operations but the farmhouse will remain unoccupied until the restoration operations are complete. There will be no effect on the appreciation of the significance of this heritage asset during the restoration operations. Following completion of restoration there will be no adverse effects on the setting of Cooks Hole Farmhouse due to the natural appearance of the restored landform and its integration into the landscape. No residual impacts will remain once restoration is complete. The appreciation of views of Cooks Hole Farmhouse will be increased from the elevated reinstated Footpath Thornhaugh No 3 Section 3 and Footpath Thornhaugh No 3 Section 4.

Landscape and visual effects

- A landscape and visual impact assessment was carried out. The existing visibility of the site was determined and the effects on landscape features, landscape character and visual receptors at different stages of the proposed development were assessed. The site does not lie within an area designated at a statutory /national or non statutory /local level for its landscape value or quality.
- 5.10 The proposed development will result in limited adverse effects on landscape features, landscape character or visual receptors. There will be little impact on landscape character as a result of the proposed development. The site is well



screened and there are limited receptors with clear views of the site. The only significant effect as the result of the proposed development will be the loss of views from Footpath No 3 Sections 3 and 4 due to the temporary closure of the footpaths during the operational period. The footpaths will be reinstated following the completion of the operations. The proposed restoration scheme will result in significant biodiversity net gain which is beneficial for landscape features and character.

Flood risk assessment and surface water drainage

- 5.11 An assessment of the potential impacts of the proposed development on surface water flow and flood risk at and in the vicinity of the sites has been undertaken. The sites are currently the subject of consented surface water management schemes for the operational phases and following the completion of restoration operations at the sites.
- 5.12 The proposed development includes no change to the general arrangement of the consented surface water management infrastructure at the Thornhaugh site. The proposed restoration profile follows the best practice principles for the design of restored landfill sites including in particular that the landform should be raised with slopes designed to shed water. As part of the proposed development a series of detention basins are included in the design of the restoration landform. Detention basins are designed to remain dry or with limited water for most of the time in order to accommodate runoff as and when it occurs (Figure NTS 4). The detention basins are designed to hold back surface water so that the rate of discharge to the surface watercourse is not increased from the pre-development runoff rate. Drainage basins, channels and pipes for each catchment area will have sufficient capacity to retain and convey the runoff generated during a 1 in 100 year six hour rainfall event plus a 40% increase in the allowance for climate change.
- 5.13 The proposed development will not increase flood risk at or in the vicinity of the sites. No raising of existing ground levels are proposed in the parts of the application area located in Flood Zones 2 or 3 which are the areas either side of the Thornhaugh Brook. Surface water runoff during operations and following restoration will be managed in accordance with the surface water management scheme.



Transport and traffic

- 5.14 A Transport Statement has been prepared for the proposed development. The scope of the Transport Statement has been agreed with Peterborough City Council through the scoping process and pre-application discussions. The existing site access from the A47 will be maintained for the duration of the operations. There have been no recorded accidents at the site access in the last five years.
- **5.15** Following restoration an access for amenity use will be established at the former Cooks Hole entrance. The access for amenity use will provide suitable visibility and access to a small car park.
- 5.16 The proposed development will result in fewer Heavy Goods Vehicle movements than those previously and currently consented for the operations. The existing access is suitable and provides adequate visibility in both directions. It is concluded that the proposed development will not result in an unacceptable impact on highway safety.

Noise

5.17 The current operations at the sites are subject to noise limits which are specified in the current planning permissions. A noise impact assessment has been undertaken for the proposed development to assess the operations associated with the proposed development against the existing noise limits. The results of the assessment demonstrate that the proposed development can be undertaken without exceeding the existing noise limits for the sites. It is considered by Peterborough City Council that the existing noise limits provide sufficient protection for nearby sensitive receptors. It is considered unlikely that the proposed development would result in any significant or unacceptable adverse impacts at noise-sensitive premises in the vicinity of the sites.

Amenity including dust

5.18 An assessment has been carried out of the potential effects of the proposed development on amenity associated with dust, mud on the road and lighting. The potential for amenity impacts generally is present only in the immediate vicinity of the Cooks Hole and Thornhaugh.



- **5.19** Regular monitoring for deposited dust is carried out currently at Thornhaugh in accordance with the monitoring action plan specified in the Environmental Permit. It is concluded that dust emissions have been and will continue to be controlled effectively using common and effective methods to a standard such that it is unlikely that there will be significant dust emissions from the sites.
- 5.20 The wheel cleaning facilities at the site access will continue to be used for all Heavy Goods Vehicles visiting the site before leaving the site onto the public highway. The access road from the wheel wash to the highway is hard surfaced which minimises the potential for mud and debris to be tracked onto the road network. The hard surfaced length of the site internal access road will continue to be cleaned regularly by a road sweeper and maintained in good condition. Based on the wheel cleaning facilities and the proposed cleaning and maintenance regime the risk of nuisance from the proposed development at the sites associated with mud and debris on the local road network is low.
- There is permanent lighting at the site reception area in Thornhaugh and mobile lighting is used in the operational areas. It is considered that there will not be an unacceptable impact on amenity as a result of the continued use of lighting as part of the proposed development. With the exception of security lighting the lighting will only be used when the site is operational and all lighting will be directed downwards and shielded to minimise the visibility of light. The lighting at the site will be operated in accordance with an agreed lighting scheme.

Conclusions

- 5.22 Technical studies have been undertaken to establish the baseline environment of the application site and the surrounding areas and an assessment has been carried out of the potential impacts associated with the proposed development. The findings of the impact assessments are presented in the Environmental Statement which is submitted with the planning application and summarised in this document.
- As concluded in the assessments for each of the aspects assessed, the technical assessments demonstrate that the proposed development can be undertaken without any long term unacceptable impacts or cumulative impacts on the environment. The restoration scheme will provide new and enhanced links to existing habitats and will



extend the capacity of Bedford Purlieus to support notable species. The restoration scheme will contribute to the conservation aims of Nature Recovery Networks within the wider Rockingham Forest area. The proposed new and extended habitats will generate significant Biodiversity Net Gain substantially in excess of the 10% specified in legislation.

- **5.24** Copies of the documents including the figures are available to view online on the Augean web site at www.augeanconsultation.co.uk
- **5.25** If you need any assistance in accessing the documentation please contact us by email at info@augean.co.uk or call the telephone helpline 01780 723827.

