

DR/35/16

committee DEVELOPMENT & REGULATION

date 28 October 2016

MINERALS AND WASTE DEVELOPMENT

Proposal: **Construction of an irrigation reservoir involving the excavation, processing and removal of sand, gravel and soils, engineering works and ancillary buildings.**

Ref: **ESS/24/15/TEN**

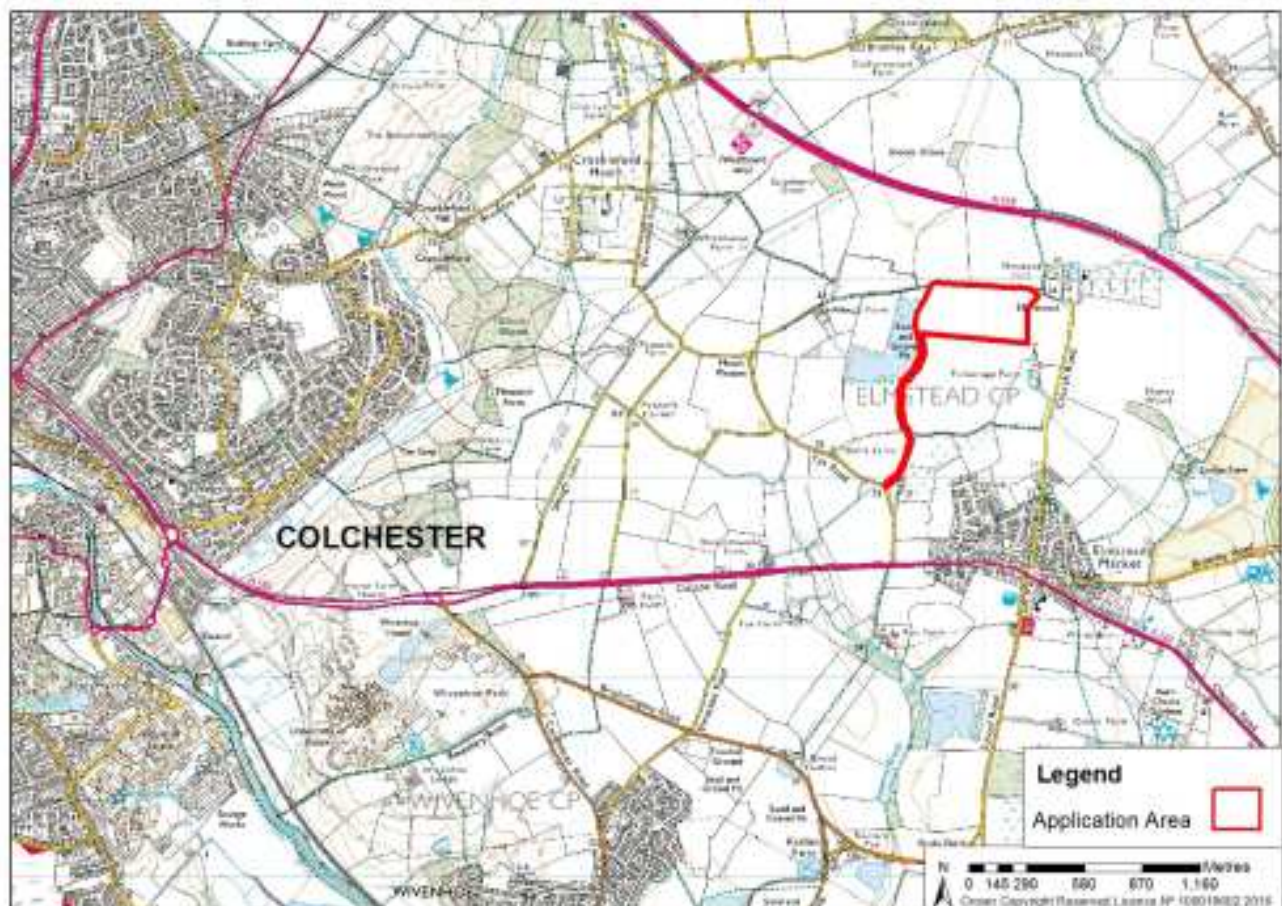
Location: **Land at Elmstead Hall, Elmstead, Colchester**

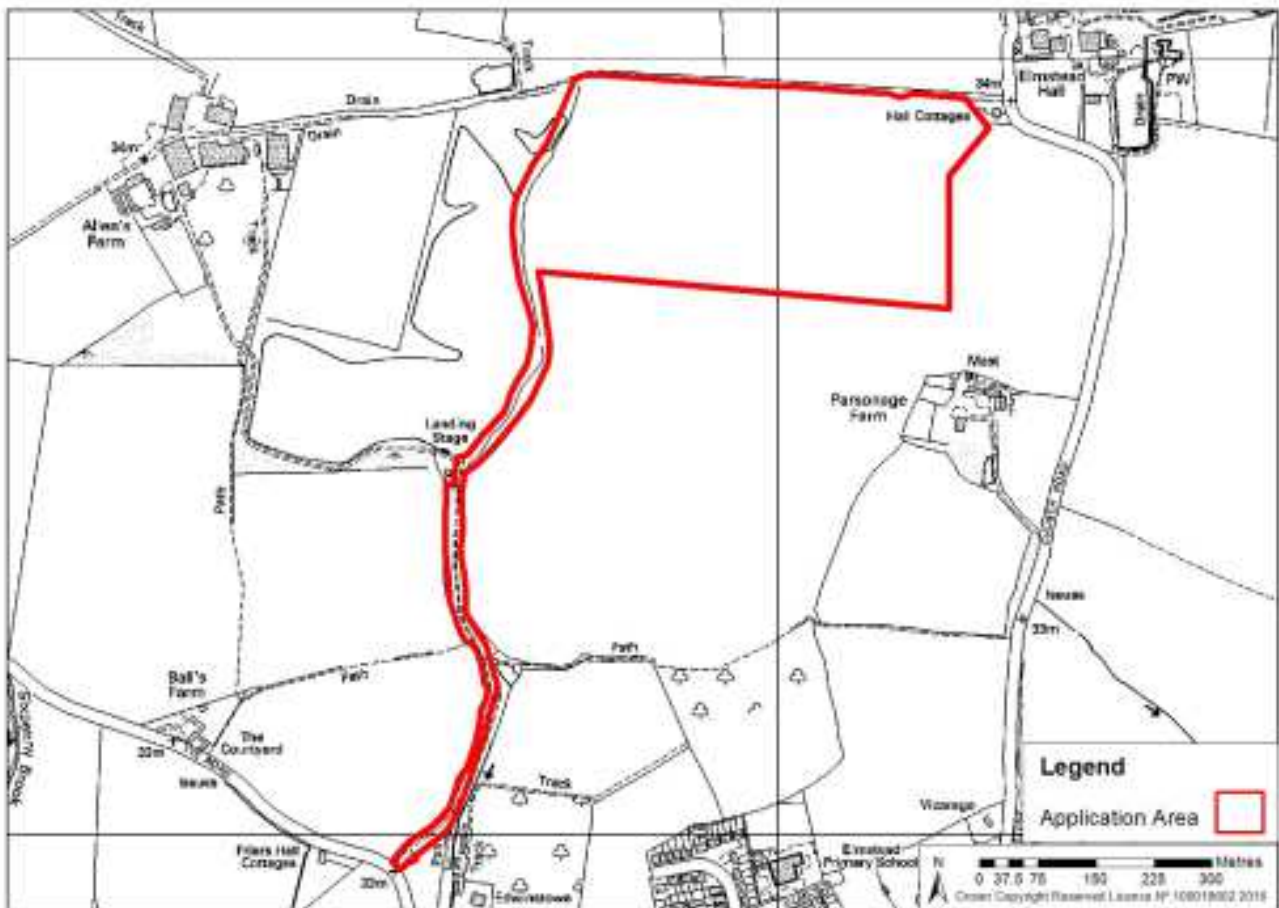
Applicant: R.W Mitchell & Sons

Report by Director of Operations, Environment and Economy

Enquiries to: Terry Burns Tel: 03330 136440

The full application can be viewed at www.essex.gov.uk/viewplanning





1. BACKGROUND

The progress of this application has been prolonged principally due to the need for additional reports being commissioned as a result of various meetings/comments between the respective County and applicant's agricultural/noise consultants.

Planning History

There is no mineral/waste planning history for the reservoir footprint itself. However, its proposed access track makes use of an existing internal farm access road that also served the construction of two irrigation reservoirs approved under permissions, TEN/258/90 and ESS/41/96/TEN when both were constructed between 1994-99. These two reservoirs now form one single entity.

A District approved Anaerobic Digester (AD) plant together with digestate lagoons is situated to the west of the proposed reservoir location and to the north of the existing two reservoirs. The AD plant is fed from on farm maize crop to supply electricity for both the farm activities and export to the national grid. The Waste Planning Authority approved in 2014 an application, ESS/12/14/TEN, for the importation of 10,000 tonnes of inert waste to infill a void (to the east of the digestate lagoons) left from the extraction of clay utilised in the construction of the AD plant.

Site location general

The general area is one comprising a low lying agricultural landscape (general height of 30 m Above Ordnance Datum (AOD)) within a wider gently undulating topography east of Colchester. The application footprint is located some 1.25 kilometres north of Elmstead Market and situated between the A120 Harwich road to the north (about 400 metres) and A133 Colchester road to the south (at some 400 metres distance). The A133 is accessed from the application land via the internal access track and Tye Road. The farm track is concreted for its first 30 metres from Tye Road, where it is some 6.5 metres wide, and thereafter with a hard bound surface continues northwards, at about 3 metres wide, for some 560 metres to the existing reservoirs known as Allen's Farm reservoir. Towards the southern half of the access track, Footpath No. 7 approaches the track from the east and then runs parallel to the eastern side of the track for a short distance before branching off east again. The farm access track continues northwards between agricultural fields and passing to the east of Allen's Farm reservoir before reaching a "T" junction. At this point the track would form the western boundary of the proposed reservoir. Going east from the junction the track continues towards and then past Hall Cottage and Elmstead Hall whilst westwards from the junction the track skirts to the north of Allen's Farm reservoir and leads into and past Allen's Farm itself (some 550 metres west). This east-west track is also shared by Footpath No. 2 and both track/footpath from the junction eastwards would represent the proposed reservoirs northern boundary.

South east of the proposed reservoir lies Parsonage Farm at some 150 metres. Remaining land to the south and north beyond the track comprises agricultural fields.

Application area

The overall application footprint comprises some 13 hectares of land made up of the footprint of the reservoir (measuring some 9 hectares of which 5 hectares/180 metres x 440 metres would be the reservoir proper and 4 hectares an adjoining wetland/nature conservation interest), together with that part of the existing access track leading from Tye Road northwards to the south west corner of the proposed reservoir. The reservoir footprint relief reflects the surrounding topography with the land rising gradually from 30m AOD on its eastern edge to 32m AOD on its western side.

The applicant confirms that the land area to be irrigated comprises some 600 hectares of principally best and most versatile land owned by a partnership of 4 landowners making up the Allen's Farm Partnership (AFP) and who also form the water abstraction group (WAG) [a grouping of farms sharing licencing for ground water extraction]. Presently water is abstracted from both Allen's Farm reservoir, together with abstraction points that allow an underground pattern of water pipes to supply the AFP farmed land area which includes land straddling the A133 Colchester Road.

The applicant notes that the Environment Agency encourages the provision of irrigation reservoirs to secure winter water supply with the stored water then being available for use in the more severely restricted spring/summer periods. As a result the applicant has considered various options:

- (i) Increase area of existing reservoir.
- (ii) Increase area/building of embankment to existing reservoir.

- (iii) Deepening base of existing reservoir.
- (iv) Combination of the above.

The applicant notes that the existing Allen's Farm reservoir comprises engineered clay lined structure and any size/depth increase would be difficult to achieve. Re-engineering the existing reservoir would require its prior emptying with likelihood of further waste material being produced through the excavation of underlying clays requiring disposal off site. Emptying of the reservoir would also take the facility out of commission for some considerable time.

Embankment building was considered impractical with such work being considered as introducing a visual impact taking the reservoir above ground. There would also be engineering difficulties, including the need to remove clays that form the existing freeboard lip, of some 0.75 – 1 metres, around the reservoir. Such clays due to their dried out nature could not be used as liner extensions and would necessitate removal off site.

There was a conscious effort to build any new feature as close as possible to the existing reservoir to ensure ready connection to the underground water supply system and to utilising renewable energy from the adjacent AD plant. Identification of suitable locations was also constrained given the need for a certain sized reservoir, presence of underground utilities and presence of the existing underground piping system.

The applicant confirms that the WAG is located within Tendring district which is one of the driest areas in England and displays extensive tracts of good quality agricultural land where irrigation is extensively used to achieve best use of farming and water resources. The applicant calculated that the AFP requires some 530,000 cubic metres of usable water (following evaporation loss, buffering etc, see below). Provision towards this total would be achieved through use of the existing Allen's Farm reservoir supplying some usable 192,000 cubic metres (with the reservoir having a minimum of 20% loss due to evaporation and conservation aspects) and the proposed reservoir (gross storage capacity of some 340,000 cubic metres with some 260,000 cubic metres usable). This supply would contribute 452,000 cubic metres towards the WAG need. Due to abstraction licence restrictions, the applicant confirms that there is not enough abstraction capacity to fill a large reservoir. The proposed reservoir has a design buffer of between 26% and 33% (the applicant notes that the recommended bufferage by the Environment Agency is for 50%) to accommodate aquatic life that becomes established in reservoirs and to take account of evaporation and seasonal availability. As a result the usable water requirement gives a completed reservoir size requirement of some 340,000 cubic metres; the size of the proposed reservoir subject of the application. The applicant confirms that the usable amount would represent some 81% of the WAG need and require careful agreement between WAG members on irrigation use.

2. PROPOSAL

The application is supported by an Environmental Statement submitted in accordance with the EIA Regulations 2011 (a summary is at Appendix 1).

This application seeks construction over a 4 year period of an agricultural reservoir with storage capacity of some 340,000 cubic metres of which 260,000 cubic metres

would be useable to provide, along with an existing adjacent reservoir sufficient irrigation water to serve some 600 hectares of land.

The proposed access route to the reservoir would be along the existing internal farm access road to access Tye Road with vehicles then turning left to gain access to the A133 Colchester Road.

The proposed reservoir would be constructed in two phases in a west to east direction with work comprising:

- Excavating the reservoir footprint of some 180m x 440 metres to create an average reservoir depth of 7-8 metres with a 1.5 hectare wetland and 2.5 hectare grassland perimeter/margin;
- excavated material would comprise soils and underlying mineral (sand and gravel). This process would see removal of some 780,000 tonnes (450,000 cubic metres) of mineral. Of this total, some 700,000 tonnes would be seen as saleable mineral at an annual sale of some 200,000 tonnes. The remaining mineral would be classed as unsaleable/silt;
- excavated soils would be utilised either on site in 2/3 metre high perimeter bunds (subsoil would be stored in phases along the southern boundary in a 40 metre wide strip). Some soils would be utilised within the AFP holding with the remainder sold offsite. A 5 metre high bund section would be constructed along the eastern boundary to assist in noise attenuation;
- mineral would be lifted by excavator on the western side to create the first void to allow the silt water management area. Stockpiling areas would comprise a temporary area within the central footprint of the reservoir area with stockpiles to a height of 3 metres. This would be required whilst the next void area was created to accommodate the processing plant (maximum 7 metres high) located at a depth of 3 metres below ground level and above the water table. The plant area would remain in this location for the duration of the extraction works. Temporary stockpiling would then continue along the southern site boundary as the phasing moves west to east. Mineral would be transported by articulated dumptruck to the processing plant for direct feed into a hopper or into stockpiles. The plant would operate at some 125 tonnes throughput per hour;
- additional structures would include a welfare unit and fuel storage within the void area. Given the nature of the excavated material it is anticipated use of occasional onsite crushing achieved by utilising a mobile crusher brought to the site on a campaign basis and used for 4/5 days on about 2/3 times per year;
- floodlighting would be proposed on processing plant and its illumination spread restricted to within the void area;
- surplus materials including soils, materials and clays would be utilised to create shallow adjoining wetland feature;
- plant/conveyors would be visible above the perimeter screen mounds;

- stockpiles would not exceed 3 metres in height above existing ground level. It is proposed to utilise the underlying clay that lies between 7 – 9 metres below existing ground level to form engineered base and sides to the reservoir. Some clays would need to be imported.

Hedgerow and tree planting would be undertaken along the southern and eastern reservoir footprint perimeter together with a small wooded copse in the eastern corner. An avenue of trees would be planted either side of the footpath running along the northern site boundary. Planting would be subject to a 5 year aftercare scheme.

The construction would envisage generating some 80/100 HGV movements (40/50 in, 40/50 out) per day dependant on market requirements. These movements would be 8 wheel rigid 20 tonne capacity with possible use of articulated tipper lorries of up to 30 tonne capacity.

The applicant confirms that vehicles would be involved in the latter stages of the reservoir construction in backhauling with clays and that last haul would be around 17:00 hours operating on 275 operational days per year.

Vehicles would utilise the internal haul road made up of compacted material southwards to the Tye Lane entrance where a site office/weighbridge and wheel cleaner would be installed, Security gates would be provided some 20 metres in from the junction.

From Tye Road site vehicles would turn left to travel to the A 133 Colchester Road. A ghost right turn lane has already been provided at the junction as part of the previous Allen Farm reservoir traffic movement scheme.

Proposed operating hours are given as:

Monday to Fridays	07.00 – 18:00
Saturdays	07:00 – 13:00

Except for emergencies and the use of a heavily silenced pump (to maintain dewatering of the void) there would be no operations on Sundays, Bank or Public Holidays.

There would be no floodlighting other than on the processing plant where lighting provision would have a restricted lighting zone to avoid visual intrusion outside of the void area.

Extraction would take place dry through pumping. A sump would be located in the south west corner of the void area to accommodate water directed to it through basal drains to allow attenuation and settlement before being pumped out of the void via a silenced pump. Pumped water would then be fed into a recharge trench located along the southern and part of the eastern site boundary to ensure that pumped water is allowed to filter back into the natural surrounding gravels.

Dust management would be through use of an onsite tractor and water bowser unit, with the tractor also doubling as a road/excavation floor grader.

In support of the application reports have been commissioned to address:

- (i) Landscape – The application footprint is noted as being situated within the Tendring Plain, the character area identified in the Essex Landscape Character Assessment. The key characteristics for this character area are large flat farmland, dominated by arable farming, straight regular field patterns and widely dispersed woodland/copses.

The landscape report noted that there would be temporary visual presence of the perimeter bunds during site activity. The assessment notes that Hall Cottage already has filtered views and a proposed 3 metre high bund would further mitigate visual impact from this property.

In the long term, the report considers that the reservoir being of the “below ground” type would not be visible compared to the “above ground embankment” type.

The northern footpath would be separated from the reservoir site by a 2 metre high grassed bund.

There would be a new hedgerow proposed to the south, east and along the line of the northern bund once removed. A small copse would be established in the eastern half of the application area. The planting would be designed to reflect local landscape character.

- (ii) Ecology – The ecology assessment comprised an Extended Phase 1 Survey with an updated survey finding that the land had low ecological value given its existing intense agricultural use.

Ecological designated sites were noted as an SSSI identified over 2km to the South East and North West. Within 2 km of the application footprint lies a number of Local Wildlife Sites with the closest at 750 metres to the South East. There were no protected species identified within the footprint area nor were reptiles/amphibians recorded. The presence of bats was considered unlikely given lack of hedgerows present. The application would not result in any vegetation being removed and with the proposed planting and grassland/wetland provision there would likely be a net benefit to ecological interests.

- (iii) Water – A hydrogeological assessment comprising 18 mineral proving boreholes and 4 piezometres was undertaken. Sand and gravel was identified at base ranges from 5.8 – 9.2 metres below ground level with groundwater levels between 2 – 4 metres below ground level and below that available for vegetation use.

The assessment identified the presence of abstraction licences which included two private water supplies at Elmstead Hall and Hall Cottages (both under applicants control) the Church and Parsonage Farm located to the east and south east of the application footprint respectively. The assessment confirmed that there are no natural surface water features affected nor would there be direct discharge arising from the application.

The assessment did confirm that drawdown of groundwater was expected in the vicinity of the reservoir footprint out to 300 metres. As a result there were likely impacts arising on the supply of the existing identified adjacent abstraction points. The assessment considered that potential mitigation would involve the use of the recharge trench and maintaining regular contact with owners of the wells concerned and installation of a mains supply if supply fails. Additionally, minimising the time period that excavation faces are kept open and temporary lining with low permeability liner or upper weathered layer of clays would assist in minimising water loss.

No designated features were identified in/vicinity of the application footprint nor is the application situated within the Environment Agency Source Protection Zone covering groundwater.

The nearest watercourse lies some 700 metres to the east.

- (iv) Flood – A Flood Risk Assessment (FRA) was undertaken, as the application footprint was over the 1.5 hectare threshold for such assessment requirements. The FRA confirmed the application footprint as being within Flood Zone 1 (low probability of flooding) and that as a result it was considered there would be a low to negligible risk of natural cause flooding. The application footprint topography was identified as mainly level farmland 34 - 35m AOD with ground level decreasing east and south east to approximately 20 - 25m AOD offsite.

During construction the use of a recharge trench designed to the parameters proposed would accommodate the volume of water from both ground water and incidental rainfall.

Post completion the reservoir would have suitable freeboard available to accommodate rainfall/climate change.

The reservoir design has taken climate change into account noting the National Planning Policy Framework (NPPF) advice to accommodate 5% rainfall intensity between 1990 – 2025 rising to plus 20% 2055 – 2085 which would represent the lifespan of the reservoir.

Geology of the application footprint is identified as solid geology of London Clay and superficial deposits dominated by Cover Sand and the Kesgrave Catchment Sub group Formation (Interbedded clay, silt and sands).

The assessment notes that overburden would be extracted and used to backfill in the western end of the reservoir void. Weathered clays would be used in the shallows and unweathered clays used for the side and lining of the void area.

The report noted that as no surface waters would be discharged off site the greenfield runoff rate (the situation as currently experienced) would not be exceeded and therefore the flood risk to surrounding area would not be increased.

A freeboard of 1 metre around the lip of the reservoir would be maintained to accommodate a 1 in 100 year flood event; any surface water runoff arising from surrounding grassed areas together with rainfall intensities as a result of climate change.

- (v) Traffic – A Transport Statement considered use of the same access road and routing plan as undertaken for the earlier Allen's Farm reservoir construction.

The traffic assessment confirmed that the road network had ample capacity to accommodate the predicted vehicle movements associated with the present application. Tye Road has suitable sightline provision and the 400 metre stretch of road before it joined the A133 Colchester Road had previously been widened to accommodate two way HGV associated with Allen's Farm reservoir. Access onto the A133 was considered suitable with appropriate sightlines and provision of a ghost right hand turn lane.

The assessment took account of an estimated 80 movements (40 in/40 out) as average with daily average calculated at 100 movements (50 in/50 out) and a worst case of 150 movements (75 in/75 out). The assessment confirmed that the A133 is designated a Main Distributor Road and this section operates well below practical capacity of 22,000 vehicles per day and any additional traffic as a result of this application could be adequately accommodated. It was not considered that there would need to be any on/off site road improvements required.

- (vi) Archaeology – An Archaeological Desk Based Assessment was undertaken followed by an archaeological field evaluation of 28 trenches, in what is the northern part of the reservoir location and along the haul road. The report confirms not all the proposed application footprint as now submitted was trenched.

The findings of the survey work identified the application footprint as having moderate probability of prehistoric remains with Bronze and Iron Age activity identified in the north east corner and a concentration of crop marks centred around the adjacent Elmstead Hall. Some Roman pottery was located within the central part of the survey area. Overall the footprint had nothing of more than local significance and it was proposed that mitigation measures be undertaken ahead of construction.

The report identified the application footprint as lying to the south west of Elmstead Hall Grade II* Listed 15th and 16th century timber framed house, located adjacent a Grade 1 Listed Parish Church of St Anne and St Lawrence.

- (vii) Historic Buildings Assessment – The report assessed potential impact on built heritage acknowledging the close proximity to Elmstead Hall, adjacent the Church of St Anne and St Lawrence, Hall Cottages, Allen's Farm and Parsonage Farm.

The report found that no historic fabric would be affected although the setting of Hall Cottages would most be affected and would be slightly so for Elmstead Hall and Church.

The assessment concluded that the industrial activities would be short lived compared to the historic history of the buildings themselves. Mitigation would be the provision of screen bunding. It was recognised that the addition of the reservoir would ensure the continuity of the agricultural landscape and introduction of features such as hedgerows and wooded areas would be consistent with the historic landscape.

- (viii) Agriculture – The report recognised that the original Ministry of Agriculture Fisheries and Food (MAFF) 1:250,000 scale 1980 Eastern Region Agricultural Land Classification (ALC) map is of insufficient detail therefore 12 core samples were taken to precisely identify the ALC grading. A land survey was undertaken with 123 core samples being tested. The soil classification for the land found the land footprint to exhibit majority Grade 2 some Grade 1 and a small element of Grade 3a. The main limiting features of the soils were found to be stoniness and associated with this droughtiness. The report confirmed that there would be some net loss in land given most of the AFP is classed as best and most versatile. It is considered that this loss, representing 1% of overall 600 hectares, would be compensated by the ability to irrigate the overall area with greater crop productivity to give a 10% yield increase.

The report found that the certainty of irrigation gives confidence in growing wider range of crops so achieving improved levels of home grown good produce.

The report considered background design criteria and abstraction license requirements that are needed to be balanced in the reservoir design. The applicant confirms that the overall design takes account and would, in combination with the Allen's Farm reservoir supply 81% of the WAG annual requirements. The depth of the reservoir takes it to the London Clay that underlies the mineral and this would provide the water tightness and withstand the hydrostatic pressure from surrounding groundwater as the reservoir were drawn down.

The design incorporates a 1 metre free board around the lip of the reservoir for safety reasons.

The location of the reservoir having been identified through borehole assessment for suitability also balancing the location with appropriateness and to minimise loss of agricultural land. The preferred location was identified as having some 5.6 – 9 metres depth of mineral (some 4.4 – 7.6 metres thickness); 0.2 metres of topsoil and 0.1 – 2.4 metres of subsoil.

- (ix) Noise – A noise assessment undertaken assessed both the background levels as well as calculated "received" noise at 9 nearest representative residential properties against the "as raised" material being washed, regraded and removed off site. Result show with attenuation of distance/provision of 3 metre high screen bunds any changes in background remains within the criteria of NPPF Technical Advice on noise.

The assessment confirmed that the A120 traffic dominate as the background

noise for the application footprint.

The provision of the northern 2 metre high screen bund was confirmed as only needed for visual attenuation.

As is normal the report did not take account of the temporary construction/removal periods for the bunds.

The report concludes that:

- (i) Noise sensitive properties with proposed bunding in place the proposed site generated noise would not exceed the defined levels recognised in national guidance.
 - (ii) Parsonage Farm and Elmstead Hall Cottages whilst the most vulnerable if no continuous bunding/acoustic fencing in place would still have an adequate 4 dBA margin without such features.
 - (iii) Maintenance of haul road should be ensured.
- (x) Dust – The assessment noted that agricultural activities generate occasional dust themselves. The general wind direction is identified as South West so likely potential to carry dust towards Elmstead. Report noted that moisture content of mineral, bunding arrangements, good site practice and on site dust mitigation would be employed through use of a tractor and water bowser to minimise dust arisings.
- (xi) Rights of Way – Two footpaths would be affected with the northern footpath separated from the site boundary by protective perimeter bunding. The second footpath runs for a short distance parallel to the internal haul road to the south.

The footpaths report does not recommend any specific mitigation measures need be employed.

Community Publicity – The applicant confirms that occupiers of Elmstead Hall Cottages, Parsonage Farm, Allen Farm and the properties near Tye Road entrance were approached with generally favourable comments received. Some concerns were expressed about the potential impact on private water supplies. The applicant confirms that potential mitigation measures had been explained to them. The applicant notes that most of the residents were in occupation at the time of the earlier reservoir construction and so were aware of the limited impacts that occurred. The application confirms that as the potential applicant is known to the local residents that they would approach him directly with any concerns.

3. POLICIES

Section 38 of the Planning and Compulsory Purchase Act 2004 requires that consideration be had to the development plan unless other material considerations indicate otherwise. Other material considerations include:

Listed Buildings and Conservation Areas Act 1990 (LBA) Section 66 (1).
The National Planning Policy Framework (NPPF) March 2012.
Essex Minerals Local Plan Adopted July 2014

Tendring District Local Plan Adopted December 2007

The following policies of the Essex Minerals Local Plan Adopted July 2014 and Tendring District Local Plan Adopted December 2007 provide the development plan framework for this application. The following policies (paraphrased or in quotation marks if set out in full) are of relevance to this application:

Relevant policies within the Essex Minerals Local Plan Adopted July 2014 are:

Policy S1 "Presumption in favour of sustainable development"

States that the Mineral Planning Authority (MPA) will take a positive approach to minerals development (which includes processing, storage and transportation of minerals) that reflects the presumption in favour of sustainable development as required by the National Planning Policy Framework. The policy supports mineral development that improves the economic, social and environmental conditions in the area.

a) Policy S6 "Provision for sand and gravel extraction"

This policy whilst seeking to ensure sufficient reserves of mineral are maintained within the County seeks to resist mineral extraction outside of Preferred or Reserve Sites unless the application demonstrates::

- "a. An overriding justification and/or overriding benefit for the proposed extraction, and
- b. The scale of the extraction is no more than the minimum essential for the purpose of the proposal, and
- c. The proposal is environmentally suitable, sustainable, and consistent with the relevant policies set out in the Development Plan".

b) Policy S10 "Protecting and enhancing the environment and local amenity"

Requires that minerals development demonstrate (and where relevant to this application):

- "Appropriate consideration has been given to public health and safety, amenity, quality of life of nearby communities, and the natural, built, and historic environment,
- Appropriate mitigation measures shall be included in the proposed scheme of development, and
- No unacceptable adverse impacts would arise....."

c) Policy S11 "Access and Transportation"

Minerals development would be supported where demonstrated there would be no unacceptable impacts on the efficiency and effective road network operation, including safety, capacity, amenity and the environment.

The policy further supports road transportation where the highway network is suitable for HGV or can be improved to accommodate such vehicles.

d) Policy S12 "Mineral Site Restoration and Afteruse"

Provides support for mineral development where the land is capable of being restored at the earliest opportunity; to an acceptable standard and beneficial afteruse; with environmental benefits to environment, biodiversity and /or local communities.

e) Policy DM1 “Development Management Criteria”

Provides support for minerals development subject to the development not having an unacceptable impact, including cumulative impact with other development, upon (with relevance to this application) local amenity; health of local residents; safety and capacity of the road network and the visual environment.

Relevant policies within the Tendring District Local Plan Adopted 2007 are:

a) Policy TR1a “Development affecting highways”

Provides for applications affecting highways to be considered accommodating the proposed traffic generation.

b) Policy RA8 “Agricultural Reservoirs”

Provides support to such features where “no material adverse impact on:

- i. landscape characteristics;
- ii. biodiversity;
- iii. historic environment;
- iv. public rights of way;
- v. important nature conservation sites;
- vi. floodplain and associated flood storage; and
- vii. public safety.

Where there would be an impact on the supply of aggregate, the developer must prove the agricultural need for the water.

Applications will be expected to include high quality landscaping both on and off site. Furthermore, the development must be designed to maximise opportunities to create wildlife habitat and measures need to be put in place to ensure suitable management”.

The Tendring Local Plan Adopted 2007 is considered by the District to be out of date in certain aspects and a new local plan is being prepared. A Written Statement of the 2012 Draft Local Plan as amended by 2014 Focussed Changes has been made. A planning officers report was made to the District in November 2014 seeking to confirm for inclusion in the new plan that policy PLA3 Water Conservation, Drainage and Sewerage remained supportive of “*agricultural reservoirs and/or winter storage facilities subject to detailed consideration against relevant other policies within this plan*”.

The Draft Local Plan continues to reflect the districts low rainfall position, water support for irrigation being a priority.

The Listed Buildings and Conservation Areas Act 1990 (LBA) Section 66 (1) states, inter-alia that; in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority shall have

special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.

The National Planning Policy Framework (NPPF), published in March 2012, sets out requirements for the determination of planning applications and is also a material consideration.

In respect of Local Plans, paragraph 214 of the NPPF states that, for 12 months from the day of publication, decision-takers may continue to give full weight to relevant policies adopted since 2004 even if there is a limited degree of conflict with the Framework.

Sustainable development is at the heart of the NPPF which sets as its beacon the Brundtland definition (United Nations General Assembly quote prior to Paragraph 6). The Government's "broad" interpretation has the NPPF setting the scene for placing sustainable development at the heart of the planning system with three principally dimensions; that of economic, social and environmental. The Government sets a series of core planning principles to be applied at both plan making, as well as at decision making and that these include in relation to this application:

- i) Seek to secure high quality design and a good standard of amenity in relation to existing occupants of land and buildings.
- ii) Supporting the transition to a low carbon future in a changing climate and encouraging the use of renewable resources.
- iii) Contribute to conserving and enhancing the natural environment and reducing pollution.
- iv) Promote the development and diversification of agricultural and other land based businesses.

The NPPF seeks the delivery of sustainable development through the planning system encouraging and supporting economic growth and that this is achieved through proactively meeting the needs of business.

The NPPF recognises that transport issues, through their movement and mode contribute to facilitating sustainable development and that encouragement should be given to reductions in greenhouse gases to help towards achieving a low carbon future. Furthermore, promoting and exploiting such opportunities for sustainable transport development can be assisted through appropriately located and designed development that accommodates the efficient delivery of supplies.

The NPPF seeks to mitigate, through appropriate planning decisions, the potential for noise and other adverse impacts including air quality, arising from a development on health and quality of life.

Para 14 of the NPPF sets for decision takers the presumption in favour of sustainable development to mean approving development that accords with the development plan. Where the development plan is absent, permission should be granted unless adverse impacts would significantly outweigh the benefits or that specific policies in the NPPF indicate such development be restricted.

Para 28 of the NPPF seeks through planning policy for promotion of economic growth in rural locations including “development and diversification of agricultural and other land based rural businesses”.

In respect of the heritage aspects, the NPPF states in paragraphs 128 to 134 that heritage assets are an irreplaceable (and therefore finite) resource and should be conserved in a manner appropriate to their significance and notes that any harm or loss should require clear and convincing justification. It requires applicants to describe the significance of heritage assets including any contribution made by their setting. The NPPF defines the “Setting of a heritage asset” as “The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.”

The NPPF defines “Significance (for heritage policy)” as “The value of a heritage asset to this and future generations because of its heritage interest. That interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset’s physical presence, but also from its setting.”

The NPPF states at:

Para 129. Local planning authorities should identify and assess the particular significance of any heritage asset that may be affected by a proposal (including by development affecting the setting of a heritage asset)...

Para 132 When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset’s conservation. The more important the asset, the greater the weight should be. Significance can be harmed or lost through alteration or destruction of the heritage asset or development within its setting. As heritage assets are irreplaceable, any harm or loss should require clear and convincing justification. Substantial harm to or loss of a grade II listed building, park or garden should be exceptional...

Para 133. Where a proposed development will lead to substantial harm to or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss...

Para 134. Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.

Since publication of the NPPF clarification has been made through case law as to how development affecting the setting of a listed building should be considered. The Courts have confirmed that, even where the harm to significance is found to be less than substantial, a decision maker who follows the balancing approach recommended in para 134 of the NPPF must, when performing that balance, give “*considerable importance and weight*” to any harm to the setting of a listed building and to the desirability of preserving that setting without harm and start with a “*strong presumption*” that harm to the setting of a listed building should lead to a refusal of planning permission.

Water Policy – “Water for people and Environment” - March 2009

Environment Agency statement confirms the East Anglian region has a recognised need for water to enable food to be grown.

That irrigation needs in the region are concentrated within a few months when water resources are scarce and little water returned to the environment. It is expected that irrigation demand is expected to rise 25% higher by 2020.

Food 2030 - January 2010

Report sets a 2030 goal for UK farming to produce more and impact less on natural resources. Increasing productivity sustainably should incorporate efforts to improve water efficiency and sustainable land management techniques whilst avoiding large scale land use changes.

It is recognised that irrigating vegetables (including potatoes and other root crops) will become an increasingly important use of water in the next 10 years.

Royal Agricultural Society – “Water for Agriculture – Implications for Future Policy and Practice” – October 2010

Recognised demand for water irrigation to rise. Environment Agency advises abstractors to consider being proactive in their abstraction licences and assesses whether from 2014 onwards that they will meet their needs.

It is recognised that management advances include the provision of long term storage reservoirs, varying licences to take higher flows and topping up existing reservoirs by harvesting heavier rainfall/sharing sources.

Environment Agency Water Strategy for Agriculture

This report advocates the best uses of available water by improving the security of on farm water supplies and ensuring their wise use. The report recognises that climate change and demand will increase the need for such proactive measures. Central Government encourages farmers to invest in building reservoirs that are safe and fit for the purpose.

4. CONSULTATIONS

TENDRING DISTRICT COUNCIL – No objection.

ENVIRONMENT AGENCY (EA) – No objection. The EA comment under specific headings:

- (i) Reservoir Act – Given the scale of the proposal, the application would fall under the Reservoir Act requirements for appointing appropriate engineers to design, undertake emergency flood planning.
- (ii) Flood Risk – the EA recommends that the local planning authority considers the flood risk consequences and flood path resulting from either overtopping or breach in the reservoir walls.

(iii) Permitting – The EA would deal with this aspect.

ANGLIAN WATER – No comments received.

BRITISH HORSE SOCIETY– No comments received.

COUNCIL PROTECTION OF RURAL ENGLAND– No comments received.

ESSEX BRIDLEWAY ASSOCIATION – No objection. The Association notes that the application has the opportunity to create a new circular bridleway around the development in an area that has virtually no bridleway provision. A new bridleway would be in accordance with the National Planning Policy Framework, the Essex Public Rights of Way Improvement Plan and (ECC) Development and Public Rights of Way Advice Note for Developers and Development Management Officers.

HISTORIC ENGLAND (HE) – Comment: HE note that the proposal is in proximity to both Elmstead Hall (dates from the 15th and 16th centuries, but was extensively re-worked in subsequent centuries and has good 17th and 18th century fittings) and to the Church of St. Anne and St. Lawrence located further to the east (dates largely from the 12th and 14th centuries, and is of interest both on account of its medieval architecture and for its now rare 18th century box pews and related ordering). HE note that both Hall and church form a manorial group, isolated from the village in open country. The Hall is listed at grade II* and the church at grade I on account of their special architectural and historic interest.

HE notes that until the completion of the scheme the development would be surrounded by a screen bund.

HE considers that until completion of the reservoir and removal of the bund the development would to some degree harm the setting of both the Hall and Church. HE states “The isolated and rural character of their setting would be compromised by the processing plant and bunds, and in consequence appreciation of their significance would be diminished. With the completion of the extraction works and the removal of the bund, however, these effects would cease”.

In conclusion, HE advises that the planning authority should weigh this harm against any public benefits arising from the application.

NATURAL ENGLAND (NE) - No objection, NE comment that in terms of the Wildlife and Countryside Act 1981 the application is not near any Sites of Special Scientific Interest.

In respect of other areas of interest, NE note:

- (i) In terms of Biodiversity enhancements – the application presents an opportunity to incorporate features beneficial to wildlife into its design.
- (ii) In terms of Soils and Land Quality – the proposal is outside the scope of consideration as it is unlikely to lead to the loss of more than 20 hectares of best and most versatile agricultural land.

NATIONAL GRID– No comments received.

NATIONAL PLANNING CASEWORK UNIT – No comment

RAMBLERS (BOTH FOOTPAHS SECRETARY AND COUNTRYSIDE OFFICER) –
No comments received.

UTILITIES: AFFINITY WATER; ANGLIAN WATER AUTHORITY; ANGLIAN
WATER SERVICES LTD; ARQUIVA; BRITISH TELECOM OPEN REACH; MOBILE
BROADBAND NETWORK LTD; UK POWER NETWORKS and VIATEL - No
comments received.

BRITISH PIPELINE AGENCY; COLT; ENERGETICS DESIGN AND BUILD;
FULCRUM; INSTALCOM; INTERROUTE COMMUNICATIONS; LINESEARCH;
MCNICOLAS CONSTRUCTION SERVICES; VERIZON and VODAFONE –
Unaware/do not have apparatus within the vicinity of the application site.

ESSEX AND SUFFOLK WATER; THAMES WATER PROPERTY SERVICES –
Confirm application site not in their area of interest.

COUNTY COUNCIL'S AGRICULTURAL CONSULTANT (CAC) - Comments
incorporated into report

COUNTY COUNCIL'S NOISE CONSULTANT – No objection. The Noise consultant
notes that the applicant has undertaken noise assessments at a number of noise
sensitive properties in close proximity to the application site.

The report concluded that haul road traffic movements and general site noise
generation would meet applicable noise level limits. Should planning approval be
forthcoming noise monitoring would be recommended to ensure compliance.

HIGHWAY AUTHORITY (HA) – No objection subject to the requirement that all
vehicular access to the proposal site shall be via the existing access off Tye Road,
north of the A133, and haul road only.

The HA also provide a number of advisory notes to the applicant in respect of
highway and design issues and need to seek appropriate authority in such respects.

HIGHWAY AUTHORITY (Public Rights of Way) – No objection. The Rights of Way
Officer notes that “the boundary of the development site does not cross over the
footpath so it looks unlikely that they will be any issues with user safety. If conflict is
likely to occur then it would be wise for the developer to install safety information
boards to warn vehicles of pedestrians crossing and/or vice versa. Any users walking
the private track would do so at their own risk as this is not a PRow and without
permission they would be trespassing”.

LOCAL FLOOD AUTHORITY – No objection subject to conditions requiring the
applicant to adhere to the mitigation measures set out in the submitted Flood Risk
Assessment.

PLACE SERVICES (ABOROCULTURE) ENVIRONMENT, SUSTAINABILITY AND
HIGHWAYS – No objection.

PLACE SERVICES (ECOLOGY) ENVIRONMENT, SUSTAINABILITY AND HIGHWAYS No objection subject to conditions. The Ecology Officer (EO) notes that the site is unaffected by statutory designations. Surveys of the land reveals it to be of limited ecological value although the perimeter hedgerows and trees provide both intrinsic ecological value/connectivity and nesting/foraging features for a variety of wildlife. It is noted that these features are to be protected and appropriate measures in line with BS guidance on tree protection should be put in place.

The EO notes that the proposed restoration includes reedbed which is a priority habitat within the Biodiversity Restoration Minerals Supplementary Planning Document (SPD). Conditions are proposed to ensure that the restoration programme accords with the SPD.

PLACE SERVICES (LANDSCAPE) ENVIRONMENT, SUSTAINABILITY AND HIGHWAYS – No objection subject to conditions relating to securing a planting plan/landscape management plan/grass seed mixes/amending some planting proposals.

PLACE SERVICES (HISTORIC BUILDINGS) ENVIRONMENT, SUSTAINABILITY AND HIGHWAYS – The Historic Buildings Officer (HB) recognises that harm would be caused to Elmstead Hall, Church and Hall Cottages. Relating the proximity to the actual extraction period and noting the NPPF the disturbance could be considered “less than substantial harm”. The Mineral Planning Authority should therefore consider the potential harm to the significance of the heritage assets against any public benefit arising.

PLACE SERVICES (HISTORIC ENVIRONMENT) ENVIRONMENT, SUSTAINABILITY AND HIGHWAYS – No objection subject to conditions. The Historic Environment officer noted that trial trenching had revealed below ground heritage assets primarily of Roman interest and therefore of at least local significance. It is recommended that conditions require prior archaeological fieldwork and for post excavation analysis and report preparation.

ELMSTEAD PARISH COUNCIL – Comment “We are concerned about the noise and frequency of loaded lorries using Tye Road and the A133, causing extra journeys through Elmstead. This adds trips to roads which are already overused by heavily laden lorries. Coupled with regular use we have seen the breakdown of road surfaces in Tye Road and on the A133 through Elmstead.

Also, what are the proposed temporary new routes for footpaths/bridleways 2 & 7 whilst the construction is active?”

LOCAL MEMBER – TENDRING – TENDRING RURAL WEST - No comments received.

5. REPRESENTATIONS

Site and press notifications undertaken. As a result 1 letter of representation has been received which was supportive of the application and sought clarification on how the development would affect the local footpath network.

6. APPRAISAL

The principal issues considered in respect of this proposal are;

- A. Policy Background to irrigation reservoirs.
- B. Agricultural need for the reservoir and mineral implications.
- C. Landscape and visual
- D. Traffic
- E. Noise

A. POLICY BACKGROUND

This application makes available a mineral resource arising from neither a preferred mineral site nor in a recognised Minerals Consultation/Safeguarding Area.

From a Mineral Local Plan perspective this proposal if approved would give rise to a “windfall” resource. Policy S6 of the Minerals Local Plan requires where there is likely to be mineral extraction outside of preferred/Reserve Sites for there to be demonstrated (with equal weighting between them):

- a. An overriding justification and/or overriding benefit for the proposed extraction, and;
- b. The scale of the extraction is no more than the minimum essential for the purpose of the proposal, and;
- c. The proposal is environmentally suitable, sustainable and consistent with the relevant policies set out in the Development Plan.

Policy RA8 supports agricultural reservoirs where there is no material adverse impact arising on the environment and where minerals are involved that there is an agricultural need for the water.

In line with the policy requirements consideration therefore requires whether there is a justified and leading agricultural need rather than a mineral led need.

B. AGRICULTURAL NEED FOR THE RESERVOIR AND MINERAL IMPLICATIONS

Agricultural Issues

A number of agricultural/irrigation reports have been submitted as discussions between the relevant County and applicants agricultural consultants progressed. A final review by the applicant's agent was submitted and considered to address sufficiently the outstanding aspects to enable the report to proceed. That various updating reports clarifying issues have been produced has been unfortunate and not reflected the applicant's case as best it could have been. These reports are detailed below for a better understanding of why conclusions have been reached.

The applicant's first report; *John Bailey Irrigation Report June 2013*, identified the farming business as involving potatoes and onions taking place on very free draining and easily cultivatable soil types known as Wix (silty nature) and Ebtree (sandier of the two) soil types, at all times of the year. However, the report noted that both principal soil types are droughty and without irrigation crop yield is seriously restricted

by drought in most years.

The local area's annual rainfall is around 545 mm and the soils hold their water in their upper 25 cm of topsoil (Ebtree) there being no more than 400mm of crop available water whilst the Wix series has about 50mm availability with the subsoils of both series holding less.

The report identified existing well points are able to readily supply the licenced volume of 410,000 cubic metres at a lower hourly rate over the winter months to feed the reservoir but is now virtually useless to directly feed an irrigator over the summer months.

The report considered that the planned reservoir would allow ample water to supply an extended root cereal crop and forage maize.

The agricultural consultant notes that with irrigation it is a case of juggling waters to the best effect as no two years are similar for crop varieties require differing water needs. It is confirmed that most of the potatoe and onion contracts now dictate irrigation water is available and at what quantity.

The consultant states that calculations show irrigation requirements for the current proposal/cropping as 530,500 cubic metres. The existing Allen's Farm reservoir has 240,000 cubic metres net 192,000 cubic metres allowing for 20% unusable (evaporation and minor leaks and conservation).

The agricultural consultant states "*The net effect would be that the proposed reservoir would extend the area of irrigation responsive crops grown; increasing the yields and quality on present cropping regime; allowing the land to be profitably rented out for the potatoes; reintroducing sugar beet and allowing more uniform crops in terms of their yield and quality*".

A second July 2015 report confirmed the efficiency and economies of scale that the reservoir would have to the 4 farms part of the WAG. Whilst reviewing the Bailey report the July review confirmed that of the WAG area only some 263 hectares (about 45% of the holding) has reliable water supply. "*The requirement for forage maize to fuel the anaerobic digester creates a reliance to maximise yields and control of dry matter content. Field scale vegetable crops and forage maize can only be integrated into the farming rotation with the presence of irrigation*".

The report assesses other specialist irrigation requiring agricultural crops which could be grown on the WAG and which are grown in the Tendring Hundred as: sugar beet, carrots, parsnips and lettuce.

Under the heading "*Other Considerations*" the report notes that irrigation provides crop assurance and protocols by allowing cropping to meet quality standards and continuity of supply demanded by supermarkets and other customers.

The creation of the WAG provides collaboration and sustainability, encourages siting flexibility for the reservoir and has economies of scale benefit. In addition the report also notes that the presence of forage maize in the agricultural year cycle assists in blackgrass weed suppression, which is a major UK farm problem and can reduce

yields by 5%. This benefit arises through allowing a wider cropping diversity in the rotation incorporating split cropping and agronomy programming.

The third August 2015 report confirms that during the reservoir construction period the dewatering could also be used for the water balance between the existing Allen's Farm reservoir and the construction void.

The report considers in respect of the local economy that "agribusiness" in Tendring Hundred/North Essex is the principal contributor to the local economy. The supply process from farm to retailer, the supermarkets, now depends on irrigation. The crop, especially the higher value/more specialised (vegetables, salads, beans etc, require more increased manpower and an associated increase in downstream processing, packaging, control and storage. Overall there is a requirement for increased employment and investment resulting in a major contribution to both the local and rural economy.

The report concludes that the benefit of a guarantee of water supply would underpin future viability of the farms enabling a wider range of crops to be grown as well as their quality. (irrigation now demanded by the retailers). Increasing employment and boosting contribution the business makes to local rural economy.

The County Council's Agricultural Consultant (CAC)

The CAC notes from the first Bailey report and subsequent irrigation orientated reports a lack of tie up particularly in respect of how soils on the land were dealt with and to the irrigation needs of the land.

The CAC highlights that the original Bailey report refers to soil types, using small scale mapping information, as being Grades 3 and 3b with droughtiness identified only from certain pits (downgrade and droughtiness identified for 11 pits out of 123 across the land). Later reports interpreted from greater scale mapping the land as being 70% Grade 2, 20% Grade 1 and 10% Grade 3a. The CNC noting that the predominant irrigation requirement where these soils exist is to provide consistency and cropping quality "not fundamentally to allow a range of crops to be grown which might not be considered without the benefit of irrigation".

The CAC considers that the inconsistency in the soil reports has not helped the justification for the reservoir. However, the CNC has noted the main justification as being that irrigation ensures a yield consistency and reliability of cropping. The CAC notes that it is difficult to fully support the proposal at present given the uncertainties previously referred to. The CNC in his response makes reference to the siting aspect and alternative considerations and recognises the closeness to underground mains and electricity supply that would be offered.

The CAC notes that despite meeting with the applicant and the range of reports, there are discrepancies between, and lack of cross reference and considers it has been a difficult proposal to follow and understand.

The CAC recognises that the application is for an agricultural reservoir to allow a supply of reliable water to a number of agricultural holdings. Soils on site are high quality and well suited to the range of crops grown with irrigation a well-established

practice at the WAG. It has not however been conclusively demonstrated that the volumes proposed are required to justify the reservoir size. The CAC also notes that the applicant has not clarified the proposed reservoir construction timescale given the recognised imperative and urgency from the reports/meetings to providing a water supply source. The CAC notes that a standalone reservoir could if required be constructed in a few months.

The CAC concludes that overall the reservoir is a resilient response to water availability and would provide a long term advantage to the land. Reservoirs where winter filling is available are encouraged as is collaboration working in abstraction groups which would be the case here in both examples.

In response to the CAC's concerns the applicant's agent has stated that the original soil reporting exercise for the Environmental Statement was aimed to design a working reservoir reflecting licensed water quantities and bufferage albeit an arbitrary low 26%. Between the two reservoirs the capacity generated would be 430,000 cubic metres which whilst below the 530,500 cubic metres [required by the WAG] can justify the proposed reservoir size and which on bufferage terms is lower than that recommended by the Environment Agency.

The agent concludes that there is a proven need for irrigation this being reflected in the documents identified earlier in this report and interpreted in these to include reservoirs. In respect of the timescales being questionable on urgency of need, the agent refers to the NPPF and other policy statements that accept water management, involving construction does take time. Therefore the agent considers a 4 year period as being appropriate and that water from the construction could be used to balance "recharge" existing reservoir so immediately being available for irrigation.

The agent states in respect to the CAC comments about the need for urgency that *"The application focuses on need for [a] reservoir and is not stressing that water is "urgent". However, the agent argues it should be recognised that the benefit of the reservoir needs to be seen in the context of a "farm asset" a permanent benefit, that the water license is not time limited and that need will increase due to climate change which is a long term (100 plus years) process"*.

The agent states that if consideration of the time period is an issue the reservoir could be carried out under Permitted Development Rights with stockpiling of mineral (about 5 metres high) taking place over a similar footprint as the reservoir proper together with soils. As such a fast track build would have significantly greater impact and a separate application would be needed seeking removal of the extracted material.

The agent notes their agricultural consultant views that the need for the reservoir is strongly supported as it makes best use of soils, improves yields, quality and crop range that can successfully be grown. The agent confirms that the reservoir application is a sustainable water use and builds in reliance to climate change.

Following this last response from the agent it has been considered that the issues surrounding the agricultural implications have now been suitably drawn out for the report to proceed. There is concurrence with the CAC's earlier view over the convolutions of this agricultural reasoning process where it is felt that the presentation of the evidence has had to be drawn out of the applicant and this aspect has not

reflected the applicant's case as well as it could have. The CAC has not specifically objected noting that it has been a difficult scheme to follow; that there is a need for irrigation with availability of water being a resilient response to water availability and the farming practices having an established irrigation use, farming high quality soils where irrigation provides the security for maintaining the cropping programme and quality. What the CAC has not considered being demonstrated has been the volume aspect.

If taking account of the above aspects that the balance favours, in this particular case, there being an agricultural need/benefit one also needs to assess whether the scheme also meets the other criteria of Policy S6. These further criteria refer to the scaling and duration aspects of the scheme. The rest of the policy S6 criteria on environmental suitability and consistency with other policies are addressed later in this report.

In terms of scale, seeking a smaller reservoir size than proposed could reduce the required usable water storage arrangements that the landholding can secure through its water abstraction licence arrangements. Were it considered appropriate to seek a smaller reservoir, this would undoubtedly prevent the WAG from securing the usable water requirement calculated for the land and could necessitate alternative holding capacity being sought. Potential would then exist for the water storage capacity to be taken up through a number of smaller reservoirs supporting each farm with their own attendant access and environmental issues. Such applications would likely have their own associated mineral implications.

It is acknowledged that the applicant has confirmed the proposed reservoir design is actually below the Environment Agency recommended bufferage provision (taking account of evaporation, leakage and conservation use). Whilst this suggests a larger reservoir design could, with full following of Environment Agency recommendations, be designed, the design as submitted has been scaled through the applicants technical consultants to meet the required water need of the WAG. Should planning permission be granted a suitable condition could be imposed to ensure the scaling does not go beyond the proposed design.

Comfort is also taken that the proposal is being supported through the WAG group, as opposed to one applicant seemingly benefiting, and that its benefits would be across a wider area so presenting a further sustainable use of resources. Furthermore, water resources from the provision of the two reservoirs (existing and this current application) would ensure security; resilience to climate change and continuity of a cropping programme that is representative of that already undertaken across the landholdings and within the wider locality. The applicant is not proposing introducing such speciality crops considered "alien" to the historic Tendring cropping pattern and which would not have been readily grown without the benefit of an irrigation source.

The WAG has also considered the scale of reservoir verses the loss of agricultural land to be an acceptable impact that would not compromise the integrity/viability of the WAG units in the longer term. Likewise, the WAG have the ability to cross balance the existing reservoir with pumped water so ensuring that the landholdings had the benefit of "additional" water being supplied to the existing reservoir during the construction process.

In terms of duration; a four year time period is fairly representative of the process given evidence of other such agricultural reservoir constructions both within and outside the county. The application details confirm that were a shorter timescale undertaken, and restricting the stockpiles to 5 metres height to minimise visual impact disturbance from the development would be double that presently proposed with additional land needed to accommodate soils stripped to accommodate the stockpiles themselves. A larger disturbance footprint would not only result in additional loss of agricultural land but there would be a visual presence to the above ground stockpiling impacting both on public vantage points and heritage assets.

Were mineral allowed off site to achieve a shorter construction programme there would likely be a knock on effect both in terms of the need for larger capacity processing plant capable of handling large tonnage throughputs as well as higher traffic flows. If no processing plant were in place and the mineral exported as dug this in itself could give rise to adverse traffic implications. The combination of these aspects would introduce significant negative environmental impacts into the locality.

Construction of agricultural reservoirs can, as referred to earlier be achieved by virtue of the General Permitted Development Order, be undertaken without express planning approval, and subject to any Prior Approval application being considered acceptable. Given the nature of the East Anglian surface geology any type of surface disturbance to depth is likely to encounter viable mineral in the surface (superficial) deposits. The restrictive nature of the Permitted Development Order prevents removal of such mineral off site without express planning consent. Were this application to be refused the applicant could undertake the construction less the export of the mineral either from this one reservoir or a combination of smaller reservoirs spread over the WAG holding. Such approaches themselves are likely to give rise to their own adverse environmental/agricultural impacts as a result of suitable siting requirements referred to elsewhere in this report.

Subsequent applications are then likely to arise, on the back of any Permitted Development reservoirs, seeking removal of the mineral resource. In reality the landholding/s would be able to accommodate some soil reuse although unlikely to reuse all of the excavated soils and likely none of the mineral arisings. Should planning approval to be refused on this application and construction undertaken under Permitted Development an application seeking removal off site of what would be a significant mineral resource would need to be addressed at that stage and in light of policy and sustainability aspects.

Against Policy S6 it could be considered that in this particular instance the provision of an agricultural reservoir with a controlled extraction/export of mineral would be a preferred option. Likewise, that the scale and location are suitable and the proposal sustainable and presenting a benefit to the WAG and economy as a whole. It is recognised that the East Anglian region exhibits the driest area of the country and one likely to become more so. Policy statements by DEFRA and the Environment Agency recognise this aspect and the consequence for agriculture being one that where irrigation is concentrated, irrigation needs are going to increase.

Against these considerations are those of the geological aspect whereby mineral resources, principally sands and gravel are by virtue of their shallowness and linear spread invariably encountered across the region where there is significant ground

disturbance being contemplated. Seeking to ensure such exploitable resources are not the leading reason behind such reservoir proposals is a balancing act and against which Policy S6 sets its criteria base. In this particular case the application is not considered to be in conflict with Policy S6 subject to consideration of the environmental suitability and that a reservoir provision is a justified, sustainable and suitably scaled proposal. It offers the opportunity of securing water availability for farming/food production and importantly maintaining the historical cropping aspects of the locality building in resilience to climate change that the WAG are increasing facing pressure from.

C. LANDSCAPE AND VISUAL CONSIDERATIONS

There are considered to be three elements to this aspect; the physical impact of the proposed activities; the public perception of that activity and the potential impact such activities would have on the setting of the associated heritage assets.

The topography of the land has been described earlier as being one of low level generally open character with wide views interspersed by trees/hedgerows and a dominating skyline.

There are some properties in the vicinity of the farm track/Tye Road junction, located east of the track (called Edwinstowe) and on the opposite side of Tye Road to the west (Friars Hall Cottages). However, both locations are over 60 metres distance and screened from the track by existing intervening structures/vegetation and are not considered to be prejudiced by the development proposals.

Above ground development has the potential to impact both physically and on the public perception within this level landscape. There are existing large scale built development features already existing in the locality comprising the agricultural sheds and warehouses, AD plant and over the A120 the Ardleigh Household Waste Recycling Facility can be glimpsed at certain vantage points through the vegetation from Footpath 2. These visual features are transitory and themselves do not give rise to unacceptable impact or of a feeling of closing in and urbanisation of the countryside.

The provision of grassed screen bunding would assist in mitigating visual impact arising from the excavation activities to public footpath users. The provision of the northern bund with the open character of the land north of the track remaining open would not in itself give rise to footpath users feeling of being “closed in”. The public interaction with site traffic on part of the haul road would be considered intermittent and of short duration and is not considered to seriously affect users experience of a rural walk.

Since the submission of the application the applicant has amended the proposed working scheme to enable the processing plant to be brought onto site and placed directly into the void area, A temporary stockpiling area would be created from “pre excavating” this plant area with the resource being stored across the previously stripped footprint up to 3 metres high. The previous scheme envisaged the processing plant being on higher ground outside the excavation footprint at the start of site activities and then being relocated at lower level in the third year of the four year scheme. Associated stockpiles associated with this earlier scheme would also have necessitated above ground storage. This revised location for the plant would offer a

more visually acceptable aspect to the public's experience of any development in this area.

Public enjoyment of this part of the countryside already has a semi permanent background experience of noise from the A120 which dominates this area. The temporary noise experience of the extraction activities are addressed further in this report.

Concerns were expressed by Natural England and Place Services as to potential impacts on the setting of the nearby heritage assets of Elmstead Hall and the Church although Natural England did qualify that the harm is limited. The applicant had undertaken a Historic Buildings Impact Assessment which concluded that any industrial activity would be short lived and visually mitigated through the sites proposed screen bunding.

It is noted that both Allen's Farm, Elmstead Hall and Hall Cottages are under the control of the applicant and/or WAG members. Parsonage Farm being the only third party residence directly affected by the proposals. Notwithstanding these interests the proposed scheme, whilst in place for a 4 year period would be temporary and for the most part screened. From Allen's Farm this heritage asset is already "compromised" by its associated newer physical additions of the farm warehouse. The proposed reservoir construction is at a distance from this location and is not considered to impact on Allen's farm. From Parsonage Farm, the Heritage Impact Assessment considered there to be a limited impact arising with views only of the tops of the processing plant above screen mounds occurring. Such views being filtered by existing perimeter vegetation. Likewise public passage on the adjacent Church Road that serves Parsonage Farm and Elmstead Hall gives minimal views onto Parsonage Farm given its slightly lower setting. Elmstead Hall and Hall Cottages in particular would have more direct views from the Cottages upper storey. The Church is screened by the intervening Hall and ground level views of the application area are screened for the Cottages by existing perimeter vegetation, 100 metre buffer and proposed screen bunding.

In terms of the actual and public experience of such a proposal on the landscape and interaction with the heritage assets it should be recognised that the overall scheme is temporary and screening provision proposed. The physical structure of the heritage assets is not prejudiced and the setting albeit temporary affected by the development is not considered to be such as to be considered so significant it would be in clear conflict with the NPPF tests referred to earlier in respect of consideration of effects on the settings of heritage assets. The Historic Buildings Officer response to the Historic Buildings Impact Assessment (reflecting that of the earlier Natural England comments of minimal harm) was that the proposal would be considered [under the NPPF para 134] - *development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use.*

In assessing the "public" benefit aspect the Heritage Assessment considered this to be both the security of retaining an agricultural landscape as well as the long term wider economic benefit of crop security, better quality crops, investment and employment opportunities as well as a safeguarded and sustainable water useage provision.

From public vantage points there is limited “reading” of the interaction of the reservoir development and the heritage assets particularly having Hall Cottages and existing vegetation sited between the Hall and the application footprint. The Church is located the other side of the Hall and further away from the application land that it could not be read or considered in the same visual landscape. The applicant’s assessment has already confirmed the provision of the reservoir would in effect ensure a long term security of a known and characteristic agricultural landscape in keeping with the heritage assets history.

It is not therefore considered that the setting of the heritage assets would be seriously compromised and so be considered contrary to policy S10, DM1 nor the tests in paragraphs 129 -134 of the NPPF or the statutory considerations of S66 of the Listed Buildings and Conservation Areas Act.

An element of the visual consideration having in mind the potential to impact on the local landscape/heritage interests would be the maintaining of the design parameters for the reservoir so ensuring the future safeguarding of the water resource. The design of the reservoir is one of the traditional “box” shaped design with steep slopes. Such a design is not conducive to fishing/nature conservation/amenity interests and acts in effect as a “deterrence” to such interests developing. Should planning approval be forthcoming then retaining this design could be controllable through conditioning. Retention of the reservoir shape as proposed would then ensure that after use of the reservoir would not be compromised by alternative uses becoming established as a result of construction not following an approved design. An uncontrolled design could prejudice both the function of the reservoir and potentially lead to subsequent applications coming forward seeking to capitalise on a non reservoir use developing at the site and which could have negative impacts on the setting of the heritage assets.

D. TRAFFIC IMPACT

The application site and surrounding area form part of an existing working agricultural landscape generating its own traffic movements. Further “industrial” style traffic activities include those relating to the farm warehouse activities, the adjacent anaerobic digester complex and the recently completed 2014 planning permission for the importation of 10,000 tonnes of inert materials to fill a nearby void created in the construction of the AD process. Such existing and previous traffic movements have been accommodated without significant conflict arising.

Traffic movements associated with the proposal would be utilising the internal haul road to its junction with Tye Road. The nearest residential property being located further west along Tye Road and not in direct line of sight. Users of Footpath 2 would be principally screened from the excavation void by a bund. Users of Footpath 7 alongside part of the southern haul road would not be physically affected by the traffic flows and would experience vehicle passage for a short duration in both space and time.

The distribution of vehicle movements and their routeing along the public highway are not considered to present any physical conflicts in terms of highway capacity or public amenity. The existing haul road use had previously been considered appropriate and

its location and the movements of vehicles generated are not understood to have been unacceptable in either highway or public amenity terms.

It is not considered that the proposed traffic impacts arising from this proposal would conflict with traffic/amenity policy aspects and in this respect traffic generation is considered a neutral aspect and so contrary to policy S11, TR1a and RA8. Should planning approval to be forthcoming then a suitable condition could be imposed requiring the submission of a traffic routeing scheme.

E. NOISE IMPACTS

There has been prolonged discussion between the respective County Noise consultant and that of the applicant over the methodology and background noise reporting. This aspect has now been clarified to the satisfaction of the County Noise Consultant.

Overall potential noise generation has not been found, subject to appropriate mitigation measures in respect of maintaining a continuous northern perimeter screen mound, standoff distances from Hall Cottages to the north east and positioning of the processing plant and site activities within their respective locations.

Whilst technical aspects may now be appropriate, there is also the general amenity aspect from users of the PROW and residents to the general noise climate changes to be considered. The noise reports indicate that the general locality already experiences a level of background noise from the A120 road and that rights of way users would not be presented with an unacceptable noise environment. The experience of rights of way users is not therefore considered to be seriously impacted upon by the proposal such as to conflict with policy S10 and DM1.

In terms of the noise sensitive premises at Hall Cottages, these themselves are owned by the applicant and therefore have a pecuniary interest in the application. Notwithstanding that interest, predicted noise levels are such that the occupiers of the properties would not be impacted such as disturbance would be created. The CNC has recommended appropriate monitoring at this location to confirm the predicted noise generation levels. Appropriate conditions could be applied to ensure noise levels are not unacceptable and so amenities are maintained without conflict with policy S10 and DM1.

7. CONCLUSION

This application is being made on the basis of providing a reservoir to supply water to the WAG (4 farms) with suitable water quantity for the long term continuation of the agribusiness. The application has not been found to support, as a result of securing a future water source, a change to the cropping regime such that more water reliant plants/specialist crops not already cultivated would be introduced as a result. Whilst it is always open to a farmer to change a cropping programme, in this case it has not been proposed that this would occur. Likewise comfort has been taken that this reservoir is not being solely promoted for one farm owner who already benefits from a reservoir and AD facilities but that a combination of the existing reservoir and proposed would benefit a large WAG interest.

In this particular case the proposal is seen to enable provision of a suitably sized reservoir has been found to be agriculturally justified in that its presence would secure for the WAG a reliable, sustainable and resilient storage asset to ensure a continued agribusiness cropping programme, yield quality and security of supply to the food economy. Maintaining a traditional cropping programme in this locality would contribute to securing the landscape character and agricultural setting of the heritage assets whilst providing in the long term an associated water supply.

The report does not consider that there would be any permanent harm to the setting of nearby heritage assets and that any temporary visual impact from workings would be mitigated by screen bunding/standoffs and intervening vegetation as well as limited intervisibility from public vantage points of both the heritage asset and reservoir workings.

From a landscape aspect, the proposal would be self-contained and screened from the public footpath network. From a wider perspective, the scheme would be screened by distance, intervening vegetation and lack of non pecuniary receptors. The report finds that the long term benefits would be not only enhancements around the reservoir which could be achieved in any event of a reservoir not being provided, but that through the provision of the reservoir arises the long term security of maintaining the existing agricultural landscape essential to the Landscape Character designation.

The development has been supported by an Historic Buildings Impact Assessment; the conclusions of that report finding a temporary but less than significant impact on the setting of the nearby heritage assets. When assessed against the NPPF tests the scheme is considered to have a public value that outweighs any temporary impact that may arise. The public value of the reservoir is the wider economic benefit of crop security, better quality crops, investment and employment opportunities.

From a traffic perspective the proposal makes use of an existing track leading to an already improved bellmouth to utilise a short section of Tye Road before linking onto the strategic highway network.

Traffic generation would not impact with PROW such as to be considered unacceptable and the level of traffic would be suitable for the designated highway capacity and would not, subject to appropriate routing restrictions, be travelling past sensitive receptors before the strategic highway is joined.

The proposal is seen as meeting sustainable development goals of the NPPF and Mineral Local Plan/Tendring Policies S6 and RA8. It is concluded that the application meets the criteria of Policy S6 that in this particular case a demonstrated irrigation need exists and the proposal is environmentally suitable. Likewise there is benefit by achieving economic and social security of the agricultural business and maintaining quality of food supply. The proposal builds in adaption to climate change aspects minimising impact and utilisation of water abstraction as well as mineral resource. The reservoir is a suitable size for the WAG and does not introduce any unacceptable and environmental impacts into the landscape. The reservoir does, through its development create a mineral resource capable of being worked environmentally acceptable on site and exploited in a sustainable manner.

The proposed development is therefore considered to comply with the development plan taken as a whole.

RECOMMENDED

That planning permission be granted subject to the following conditions:

Commencement and Duration

1. At least seven days written notice shall be given, to the Mineral Planning Authority of the commencement of site preparation works (for the purposes of this requirement site preparation works shall include the erection of site boundary fencing and soil stripping connected with the reservoir footprint).
2. All operations authorised or required by this permission shall cease, and all plant, machinery equipment, structures, buildings, stockpiles and other above ground infrastructure associated with the development, approved as part of this permission, less the access track and site bellmouth, subject to the other condition requirement below, shall be removed and the site restored in accordance with the conditions of this permission not later than 48 months from the date of notification of the commencement of site preparation works as notified in accordance with Condition 1.

Approved Details

3. Except as may be modified or required by the other conditions to this permission by the Mineral Planning Authority, none of the uses, operations and activities associated with the development hereby approved shall be carried out other than in accordance with the details as set out in the application letter from D. K. Symes Associates dated 19th March 2015 and accompanying:
 - a) Planning Application form dated 19th March 2015
 - b) Planning Statement and Environmental Statement Volumes 1 and 2 dated March 2015.
 - c) Drwg Nos: 1003/A/1 entitled "Application Plan" dated 12-03-2015
 - d) Drwg Nos: 1003/AD/1 entitled "Proposed Access Detail" dated 13-03-2015
 - e) Drwg Nos: 1003/PP/1 entitled "Proposed Processing Plant" dated 27-02-2015
 - f) Drwg Nos: 1003/SB/1 entitled "Illustrative Details of Typical Site Buildings" dated 27-02-2015

as amended by:

 - g) The e-mail from Douglas Symes dated 2nd June 2015 and accompanying:
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- I. Drwg no: 1003/0/1v7 entitled "Illustrative Operations Plan", dated 28/04/2015. For clarity this plan only in respect of depicting the extraction depth in the depicted cross section. Drwg no: 1003/0/1v10 below supercedes this plan in all other respects.
- II. Drwg no: 1003/CS/1 entitled "Illustrative Cross Sections – During Operations" dated 12-05-2015.
- III. Drwg No: 1003/CS/2 entitled "Illustrative Cross Sections – Completed Reservoir" dated 12-05-2015.
- IV Drwg No: 1003/R/1 entitled "Illustrative Reservoir Plan" dated 29-04-2015.
- h) The e-mail from Douglas Symes dated 27th January 2016 and accompanying Archaeological Solutions Ltd Historic Buildings Impact Assessment entitled "Proposed agricultural Reservoir, Elmstead Hall, Elmstead, Essex Historic Building Impact Assessment" dated 21st December 2015.
- i) BLacoustics Environmental Noise Survey dated February 2016 ref no: BDL3519tr2 as amended by letter from LFAcoustics dated 23rd May 2016.
- j) The e-mail from Douglas Symes dated 12th September 2016 and accompanying Drwg no: 1003/0/1v10 entitled "Illustrative Operations Plan", dated 01/09/2016.

Availability of Plans

- 4. A copy of this permission, including all documents hereby approved and any other documents subsequently approved in accordance with any conditions of this permission shall be kept available for inspection at the site during the prescribed working hours.

Protection of Existing Trees and Perimeter Vegetation

- 5. Existing hedgerows and trees within, and on the perimeter of, the site and identified for retention shall be retained and shall not be felled, lopped, topped or removed without the prior written consent of the Mineral Planning Authority. Any vegetation removed without consent, dying, being severely damaged or becoming seriously diseased (at any time during the development or aftercare period) shall be replaced with trees or bushes of such size and species as may be specified by the Mineral Planning Authority, in the planting season immediately following any such occurrences.
 - 6. No soil stripping shall take place within the footprint of the reservoir location until a scheme for the provision and protection measures of the standoff/buffer for the protection of the trees, as identified on Drwg no: 1003/0/1v7 entitled "Illustrative Operations Plan"; dated 28-04-2015 has been submitted to and received the written approval of the Mineral Planning Authority. The scheme shall make
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provision for:

- a) Measures to demarcate the standoff/buffer enhancement zones.
- b) Maintenance of the demarcation measures during the life of the site activities.
- c) Measures to restrict the open face along the standoff area to no more than one week.

For clarification all trees should be protected in accordance with BS: 5837 Trees in relation to design, demolition and construction – Recommendations.

Boundaries and Site Security

- 7. The operator shall maintain and make stock proof the perimeter hedges and fences and protect the same from damage. Where the site boundary does not coincide with an existing hedge or fence line, the operator shall provide and maintain fencing for the duration of the development and aftercare period.
- 8. No soil stripping shall take place until the footprint of the excavation area and those areas to be disturbed in the course of the reservoir construction have been physically pegged out. Those markers that can be retained during the course of the development to maintain demarcation boundaries shall be retained for that period.

Ecological Interest

- 9. No site preparation works, as defined in Condition 1 of this permission, shall take place until written confirmation has been received from a qualified ecologist that there are no protected species interests within the site. Such confirmation shall relate to a period not more than 6 days prior to the commencement of soil stripping operations.

Bird Nesting

- 10. No vegetation shall be physically disturbed during the bird nesting season (March to August inclusive) unless the vegetation identified for removal has been surveyed to confirm the absence of active bird nesting.

Archaeology

- 11. No site preparation shall take place as defined in Condition 1 of this permission until a mitigation scheme to address archaeological investigation and recording has been submitted to, and received the written approval of, the Mineral Planning Authority. The scheme shall be implemented as approved, or as may subsequently be approved, in writing by the Mineral Planning Authority. The
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scheme shall make provision for:

- a) The recording of archaeological features which are revealed during site operations.
- b) Procedures for post excavation analysis including production of an archive and report of findings made and
- c) The conservation of any artefacts which are recovered and deposit of such artefacts at a suitable museum.

Processing Plant

- 12. No processing plant shall be brought onto the application land until the "Plant Area" as shown on Drwg no: 1003/0/1v10 entitled "Illustrative Operations Plan", dated 01/09/2016, has been prepared and is available to accommodate the processing plant.

Limits of Extraction

- 13. No excavation shall be carried out deeper than 8 metres below existing ground level as provided for in paragraph 3.11.6 of the Environmental Statement and as shown on Drwg no: 1003/0/1v7 entitled "Illustrative Operations Plan", dated 28/04/2015.

Topographical surveys

- 14. A survey of site levels shall be carried out at intervals of not less than every 12 months, starting from the date on which soil stripping commences. A copy of the survey shall be submitted to the Mineral Planning Authority within 14 days of being undertaken.

Vehicle Routeing

- 15. No soil stripping shall take place until sign/s advising drivers of vehicle routes agreed with the Mineral Planning Authority have been erected and thereafter maintained during the life of the development permitted, at the site exit.
 - 16. A written record shall be maintained at the site office of all movements in/out of the site by HGVs. Such records shall contain the vehicle's registration and operating company's identity and time/date of movement. The records shall be made available for inspection by the Mineral Planning Authority if requested and retained for the duration of the life of the development permitted.
 - 17. No site preparation works shall take place as defined in Condition 1 of this permission until a Transport Plan for the routing of HGVs to and from the site has been submitted to, and received the written approval of, the Mineral Planning Authority. The scheme shall be implemented as approved, or as may subsequently be approved, in writing by the Mineral Planning Authority. The
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scheme shall make provision for:

- i) Monitoring both visual and written of the approved arrangements during the life of the site.
- ii) Ensuring that all drivers of vehicles under the control of the applicant are made aware of the approved arrangements,
- iii) Routeing map for use by drivers; and
- iv) The disciplinary steps that will be exercised in the event of default.

Highway Cleanliness

18. No mud or dirt shall be carried out onto Tye Road by vehicles using the site.

Haul Road maintenance

19. The internal haul road shall be maintained with a compacted bound surface/or tarmaced and maintained in good condition throughout the reservoir construction period as provided for in para 3.6.3 of section 3.6 on Access of Volume 1 of the Environmental Statement.

HGV Movements

20. The total numbers of Heavy Goods Vehicle (HGV) movements entering or leaving the site during any single day shall not exceed the following overall limits:

Mondays to Saturdays: 80 movements (40 in/40 out)

Sundays and Bank/Public Holidays: none

Sheeting Vehicles

21. All HGVs shall be sheeted before leaving the site.

Vehicle Maintenance

22. No servicing, maintenance or testing of vehicles or plant shall take place other than within the excavation void area. (For the purposes of this condition the restriction shall not apply to unforeseen vehicle breakdowns).

Construction Environmental Management Plan (CEMP): Biodiversity

23. No site preparation work, as defined in Condition 1 of this permission, shall take place until a scheme of working has been submitted to, and received the written approval of, the Mineral Planning Authority. The scheme shall be implemented as approved, or as may subsequently be approved, in writing by the Mineral Planning Authority. The submitted scheme shall make provision for:-
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- a) Risk assessment of potentially damaging construction activities;
- b) Identification of biodiversity protection zones;
- c) Practical measures (both physical measures and sensitive working practices) to avoid or reduce impacts during construction (may be provided as a set of method statements);
- d) The location and timing of sensitive works to avoid harm to biodiversity features;
- e) The times during construction when specialist ecologists need to be present on site to oversee works;
- f) Responsible persons and lines of communication;
- g) The role and responsibilities on site of an ecological clerk of works or similarly competent person; and the
- h) Use of protective fences, exclusion barriers and warning signs.

The approved CEMP: Biodiversity shall be implemented and adhered to throughout the construction period of the development hereby approved.

Scheme of Working

24. No site preparation work, as defined in Condition 1 of this permission, shall take place until a scheme of working has been submitted to, and received the written approval of, the Mineral Planning Authority. The scheme shall be implemented as approved, or as may subsequently be approved, in writing by the Mineral Planning Authority. The submitted scheme shall make provision for:-
- a) Screener technical data and elevation/cross sections.
 - b) Processing plant technical data and elevation/cross sections.
 - c) Silt handling arrangements.
 - d) Water pump technical data and plan/elevations.
 - e) Arrangements for the day to day onsite assessment of depth levels.
 - f) A programme of grass cutting and weed control on any storage mounds which avoids the bird breeding season.
 - g) Cross sections through the application area using Drwg no: 1003/0/1v10 entitled "Illustrative Operations Plan", dated 01/09/2016 on a central north-south and central east –west axis to clarify depth and relationship of processing plant and temporary "as dug" storage mound with outside application land vantage points.

Sale of Aggregate

25. There shall be no retailing or direct sales of soils or bagged aggregates to the public from the quarry.

ENVIRONMENTAL PROTECTION

Hours of Operation

26. a) No operations authorised or required by this permission shall be
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carried out on the site except between the following times:-

0700 – 1800 hours	Mondays to Fridays.
0700 – 1300 hours	Saturdays.

- b) There shall be no working on Sundays or Bank/National Holidays.
- c) This condition shall not apply in cases of emergency when life, limb or property is in danger. The Mineral Planning Authority shall be notified, in writing, as soon as possible after the occurrence of any such emergency.

Importation

- 27. No materials for infilling or excavated materials, including minerals, shall be imported to the site other than clays for site lining purposes.

Rubbish

- 28. All rubbish and scrap materials generated on the site shall be collected and stored in a screened position within the site area until such time as they may be properly disposed of to a suitably licensed waste disposal site.

Burning

- 29. No waste or other materials shall be burnt on the site.

Lighting

- 30. No artificial external lighting, whether free standing or affixed to infrastructure, that may be required to be provided within the application site shall be installed until a scheme of lighting at the site has been submitted to, and received the written approval of, the Mineral Planning Authority. The scheme shall be implemented in accordance with the details as approved. The submitted scheme shall make provision for:
 - a) Lighting point location.
 - b) Lighting design details.
 - c) Proposed Illuminance coverage.
 - d) Assessment of sky glow and light spillage outside of site boundary.

Noise – Monitoring

- 31. No site preparation works shall take place, as defined in Condition 1 of this permission, until a scheme of site noise monitoring has been submitted to, and has received the written approval of, the Mineral Planning Authority. The scheme shall be implemented as approved and shall make provision for:
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- a) A programme of implementation to include the noise monitoring locations identified in Condition (33) below and as identified on the attached plan no: ESS/24/15/TEN/A entitled “Noise Monitoring Locations” during the life of the development.
- b) Noise monitoring at three monthly intervals.
- c) Monitoring during typical working hours with the main items of plant and machinery in operation.
- d) Monitoring to be carried out for at least 2 separate periods and for at least a total of 30 minutes at each monitoring location during the working day whilst typical site operations are occurring.
- e) The logging of all weather conditions including wind speed and direction.
- f) The logging of both on site and off site noise events occurring during measurements with any extraneous noise events identified and, if necessary, discounted from the measured data.
- g) The results of the noise monitoring to be made available to the Mineral Planning Authority no later than 7 days following the date of the measurement.

The location of monitoring points may be varied with the written approval of the Mineral Planning Authority as the site develops and noise levels shall correlate with those levels in Condition (33).

Noise – Temporary Operations

- 32. For temporary operations, the free field Equivalent Continuous Noise Level (LAeq,1hr) at noise sensitive properties as listed in Condition 33 shall not exceed 70dB LAeq,1hr. Measurement shall be made no closer than 3.5m from the façade of properties or other reflective surface and shall be corrected for extraneous noise.

Temporary operations shall not exceed a total of eight weeks in any continuous 12 month duration. Five days written notice shall be given to the Mineral Planning Authority in advance of the commencement of a temporary operation. Temporary operations shall include site preparation bund formation and removal, site stripping and restoration and any other temporary activity that has been approved in writing by the Mineral Planning Authority in advance of such a temporary activity taking place.

Noise – Normal Operating Levels

- 33. Except for temporary operations, the free field Equivalent Continuous Noise Level (LAeq,1hr) at noise sensitive premises adjoining the site, due to operations in the site, shall not exceed 1h, the LAeq levels as set out in the following table and identified on the attached plan no: ESS/24/15/TEN/A entitled “Noise Monitoring Locations”:

Receptor Location	Criterion / dB LAeq,1hr
Holly way	49 dB
Parsonage Farm	48 dB
Elmstead Hall & Cottages	48 dB
Mount Pleasant Cottages	47 dB
Allen's Farm	47 dB
Balls Farm	48 dB
Fen Farm	55 dB
Fern Villa	54 dB
Edwinstone	48 dB
Friars Hall	48 dB

Measurements shall be made no closer than 3.5m to the façade of properties or other reflective surface and shall have regard to the effects of extraneous noise and shall be corrected for any such effects.

Loudspeakers

34. No sound reproduction or amplification equipment (including public address systems, loudspeakers etc) which is audible at the nearest noise sensitive location shall be installed or operated on the site without the prior written approval of the Mineral Planning Authority.

Reversing alarms

35. Only broadband sound emitting reversing alarms shall be employed on vehicles and plant engaged in site activities and transport on and off site.

Dust

36. No site preparation works shall take place, as defined in Condition 1, until a scheme for dust monitoring/mitigation at the site has been submitted to, and received the written approval of, the Mineral Planning Authority. The scheme shall be implemented in accordance with the details as approved, in writing, by the Mineral Planning Authority. The submitted scheme shall make provision for:
- a) A dust control plan.
 - b) A dust monitoring plan to include:
 - I. The location(s) of dust monitoring points.
 - II. The type of monitoring equipment to be used, the pollutant to be monitored and the standard to be monitored against.
 - III. A programme of monitoring to commence prior to soil stripping to provide a baseline against which to compare future monitoring.
 - IV. A programme of implementation to include frequency of monitoring
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and locations during the various Excavation phases.

- V. log of complaints from the public and a record of the measures taken to be kept and submitted to the Mineral Planning Authority on request.
- VI. The results of dust monitoring over each three month period shall be submitted to the Mineral Planning Authority within 21 days of the end of each three month monitoring period.

Groundwater monitoring

37. No site preparation works shall take place, as defined in Condition 1, until a scheme for monitoring/reporting ground water levels at the site during the period of extraction works as provided for in Paragraph 5.10 of the Hafren Water Hydrological Assessment has been submitted to, and received the written approval of, the Mineral Planning Authority. The scheme shall be implemented in accordance with the details as approved, in writing, by the Mineral Planning Authority. The submitted scheme shall make provision for:

A programme of site monitoring including method of monitoring, locations and frequency covering the construction

- a) period and filling of the reservoir.
- b) Reporting methods and timescales.
- c) Such measures as to mitigate water loss at any adjacent receptors as a result of drawdown of groundwater and timescales for implementing mitigation measures.

Surface Water Drainage and Pollution Protection

38. Any oil, fuel, lubricant, paint or solvent within the site shall be stored so as to prevent such materials contaminating topsoil or subsoil or reaching any watercourse.
39.
 - a) Any fixed or free standing oil or fuel tanks shall be surrounded by a fully sealed impermeable enclosure with a capacity not less than 110% of that of the tanks so as to fully contain their contents in the event of any spillage;
 - b) If there is multiple tankage, the enclosure shall have a capacity not less than 110% of the largest tank;
 - c) All filling points, vents and sight glasses shall be within the sealed impermeable enclosure; and
 - d) There shall be no drain through the impermeable enclosure. (The applicant's attention is drawn to the requirement set out in BS 799 Part 5: 1987.)
40. All foul drainage shall be contained within a sealed and watertight cesspit fitted with a level warning device constructed to BS 6297 "Design and Installation of
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Small Sewage Treatment Works and Cesspools" (1983).

41. No drainage from the site, or from areas immediately adjoining the site, shall be interrupted either partially or fully by the operations hereby approved.
42. No foul or contaminated surface water or trade effluent shall be discharged from the site into either the ground water or surface water drainage systems except as may be permitted under other legislation.

Fixed Plant and Buildings

43. Notwithstanding the provisions of Article 3 and Part 19 of Schedule 2 of the Town and Country Planning (General Permitted Development) Order 2015 as amended, no plant/structures whether fixed or static, lagoons, stocking of minerals or other materials or other structures shall be erected or placed on the site, except as provided for under other conditions of this permission.

Handling and Storage of Soil and Soil Forming Material

44. Prior to the stripping of any soils from the site, excess vegetation shall be removed from the areas to be stripped (The term 'excess vegetation' in this condition means all vegetation above a height of 154mm (6") above ground level).
45. Before any part of the site is excavated or traversed by heavy vehicles or machinery (except for the purpose of stripping that part or stacking topsoil on that part), or used for the stacking of subsoil or soil-making material, all available topsoil shall be stripped from that part.
46. No operations involving soil lifting/replacement shall take place between the months of October to March inclusive.
47. No movement of soils or soil-making materials shall take place except when the full depth of soil to be stripped or otherwise transported is in a 'suitably dry' soil moisture condition. Suitably dry means the soils shall be sufficiently dry for the topsoil to be separated from the subsoil without difficulty so that it is not damaged by machinery passage over it.

(For clarity, the criteria for determining "suitably dry soil moisture conditions" and "dry and friable" is based on a field assessment of the soils wetness in relation to its lower plastic limit. The assessment should be made by attempting to roll a ball of soil into a thread on the surface of a clean plain glazed tile (or plate glass square) using light pressure from the flat of the hand. if the soil crumbles before a long thread of 3mm diameter can be formed, the soil is dry enough to move. The assessment should be carried out on representative samples of each major soil type.)

48. All suitable soils and soil-making material shall be recovered where practicable during the stripping or excavation operations and separately stored.
49. No site preparation works shall take place, as defined in Condition 1, until a scheme to address how site soils are to be handled, stored, retained on the farm unit or exported has been submitted to, and received the written approval of, the Mineral Planning Authority. The scheme shall be implemented in accordance with the details as approved, in writing, by the Mineral Planning Authority. The submitted scheme shall make provision for:
- a) The total quantities of soils both sub and topsoil to be disturbed within the footprint of the application land.
 - b) Handling and storage arrangements during the life of the development.
 - c) The type and quantities of both subsoil and topsoil to be retained on the application footprint land and that which is to be exported.
 - d) The arrangements for identifying which soils both subsoil and topsoil are to be retained and which are to be exported.

For clarity soils removed during the process of the application works permitted under this permission may require separate planning approval at the receiver locations.

50. The topsoil, subsoil, and soil-making material mounds shall be constructed with only the minimum amount of compaction necessary to ensure stability and shall not be traversed by heavy vehicles or machinery except during stacking and removal for re-spreading during the restoration of the site. They shall be graded and seeded with a suitable low maintenance grass seed mixture in the first available growing season following their construction. The sward shall be managed in accordance with correct agricultural management techniques throughout the period of storage.
51. No soil stripping shall take place until a soil movement and storage scheme has received the written approval of the Mineral Planning Authority. The scheme shall provide for amongst other matters:
- (i) Identification on the ground of the different top and subsoil types.
 - (ii) Lifting, storage and recording arrangements for the differing soil types.
 - (iii) Overlap of soil types in a storage mound being kept to the minimum necessary for the effective formation of that mound and the interface being defined on site and on a record plan so that it can be easily located at mound removal stage.
52. Such precautions unless as may be necessary to prevent the mixing of the soil types with any overlap of soil types in a storage mound be kept to the minimum necessary for the effective formation of that mound and the interface shall be defined on site and on a record plan so that it can be easily located at mound removal stage.
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53. All soil and soil forming material storage mounds, together with all areas that remain unworked, or have been restored, shall be kept free of weeds and all necessary steps shall be taken to destroy weed at an early stage of growth to prevent seeding.
54. An annual report, together with plans at a scale to be agreed with the Mineral Planning Authority, setting out the previous year's soil movement and restoration shall be submitted by 31st December each year, or such other date as may be agreed in writing with the Mineral Planning Authority.

Restoration

55. Within 12 months of the date of this permission, a revised restoration scheme based on Drwg Ref No: Figure 2.3 – 4 Rev B entitled “Scenario 2 Restoration to Agriculture” has been submitted to, and received the written approval, of the Mineral Planning Authority. The scheme shall then only be implemented as approved, or as may subsequently be approved, in writing, by the Mineral Planning Authority. The submitted scheme shall make provision for:-
- c) Restored landform contour levels.
 - d) Reinstatement programme including soil profiles for the area identified for “land returned to agriculture”.
 - e) Removal of all site structures.
 - f) Reduction in size of the Tye Road bellmouth and verge reinstatement together with its treatment.
 - g) Site water drainage.
 - h) The provision of the wetland together with cross sections, levels and engineering details.

Landscaping

56. Within 6 months of the date of this permission, a scheme of landscaping, based on Drwg No: 1003/R/1 entitled “Illustrative Reservoir Plan” dated 29-04-2015, shall be submitted to the Mineral Planning Authority. The scheme shall be implemented in accordance with the details as approved, in writing, by the Mineral Planning Authority. The submitted scheme shall make provision for:
- i) A landscape management plan.
 - j) The proposed northern tree avenue to be revised incorporating irregular tree rows.
 - k) Husbandry management of the existing mature trees.
 - l) Ground preparation works, including soil assessment, ripping, fertilising etc.
 - m) Planting species including berry bearing shrubs, size, density, numbers and location.
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- n) Perimeter hedgerow planting around site perimeter including access track to south and bellmouth as well as along northern edge of track forming northern site boundary (as recommended in Section entitled "Habitat Restoration and Enhancement Measures" paragraphs 3.18 – 3.30 of the Ecological report entitled "Appraisal of Ecological Interests and Constraints" dated February 2015 accompanying the planning application).
- o) Grass seed mixes and rates.
- p) A programme of implementation to include the provision for planting during the first available season following restoration.
- q) A programme of maintenance.

Trees, shrubs and hedges planted in accordance with the approved scheme shall be maintained and any plants which at any time during the life of this permission including the aftercare period, die, are removed or become seriously damaged or diseased shall be replaced in the next planting season with others of a similar size and species, unless otherwise agreed in writing with the Mineral Planning Authority.

Biodiversity Management Plan

57. No site preparation work, as defined in Condition 1 of this permission, shall take place until a Biodiversity Management Plan has been submitted to, and received the written approval of, the Mineral Planning Authority. The scheme shall be implemented as approved, or as may subsequently be approved, in writing by the Mineral Planning Authority. The submitted scheme shall make provision for:-
- a) A description and evaluation of features to be managed;
 - b) Ecological trends and constraints on site that might influence management;
 - c) Aims and objectives of management;
 - d) Appropriate management options for achieving the aims and objectives of the project;
 - e) Measures to secure biodiversity interest as reservoir is drawn down to supply water.
 - f) Prescriptions for management actions;
 - g) Preparation of a work schedule (including an annual work plan capable of being rolled forward over a five-year period);
 - h) Details of the body or organisation responsible for implementation of the plan;
 - i) On-going monitoring and remedial measures.

The Plan shall include details of the legal and funding mechanism(s) by which

the long-term implementation of the plan will be secured by the developer with the management body(ies) responsible for its delivery. The plan shall also set out (where the results from monitoring show that conservation aims and objectives of the Plan are not being met) how contingencies and/or remedial action will be identified, agreed and implemented so that the development still delivers the fully functioning biodiversity objectives of the originally approved scheme.

Amenity Aftercare

58. Within one year of the date of the commencement of site preparation works as provided for by Condition 1 of this permission a wetland/woodland aftercare scheme providing for such steps as may be necessary to bring the land to the required standard for use as a reservoir and associated wetland/woodland habitat shall be submitted for the approval of the Mineral Planning Authority. The wetland/woodland aftercare scheme shall be implemented in accordance with the details as approved, or as may subsequently be approved, in writing, by the Mineral Planning Authority. The submitted scheme shall specify the steps to be carried out and their timing within a five year aftercare period, or such longer period as may be proposed, and shall make provision for:-

- (i) a management plan and strategy;
- (ii) a programme to allow for monitoring the establishment of the wetland and aquatic vegetation which shall provide for:
 - (a) such work as is necessary to enable the establishment of (ii) above; and
 - (b) maintenance arrangements to include such amendments to drainage patterns, and replacement and/or control of plant species as required to achieve the objectives;
 - (c) For the woodland area the::
 - cultivation practices;
 - post-restoration secondary soil treatments;
 - soil analysis;
 - fertiliser applications, based on soil analysis;
 - drainage;
 - tree planting and maintenance;
 - weed control;
 - (d) annual meetings with representatives of the Mineral Planning Authority and landowners to review performance.

All areas the subject of wetland aftercare shall be clearly defined on a plan together with the separate demarcation of areas as necessary according to differences in management.

The period of wetland aftercare for the site or any part of it shall commence on the date of written certification by the Mineral Planning Authority that the site or,

as the case may be, the specified part of it has been satisfactorily restored.

Cessation

59. In the event of site operations being discontinued for six months in the period specified in Condition (2) then the land as disturbed within the approved extraction area shall be restored in accordance with a scheme submitted by the developer which has the written approval of the Mineral Planning Authority. The scheme shall be submitted not later than one month from the Mineral Planning Authority's issue of written notice that it is of the opinion that land reclamation work has not taken place in the six month period and shall include the requirements of Conditions 55 and 56 inclusive of this permission. The scheme, as approved by the Mineral Planning Authority, shall be commenced within three months of notification of determination of the scheme and shall be fully implemented within a further period of 12 months or such other period as may be approved by the Mineral Planning Authority.

7. BACKGROUND PAPERS

Consultation replies
Representations

THE CONSERVATION OF HABITATS AND SPECIES REGULATIONS 2010 (as amended)

The proposed development would not be located adjacent to/within distance to a European site.

Therefore, it is considered that an Appropriate Assessment under Regulation 61 of The Conservation of Habitats and Species Regulations 2010 is not required.

EQUALITIES IMPACT ASSESSMENT

This report only concerns the determination of an application for planning permission. It does however take into account any equality implications. The recommendation has been made after consideration of the application and supporting documents, the development plan, government policy and guidance, representations and all other material planning considerations as detailed in the body of the report.

STATEMENT OF HOW THE LOCAL AUTHORITY HAS WORKED WITH THE APPLICANT IN A POSITIVE AND PROACTIVE MANNER

The Mineral Planning Authority has engaged with the applicant prior to submission of the application, advising on the validation requirements and likely issues.

Throughout the determination of the application, the applicant has been kept informed of comments made on the application and general progress. Additionally, the applicant has been given the opportunity to address any issues with the aim of providing a timely decision.

LOCAL MEMBER NOTIFICATION

LOCAL MEMBER – TENDRING – TENDRING RURAL WEST

SUMMARY OF ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR:

Construction of an irrigation reservoir involving the excavation, processing and removal of sand, gravel and soils, engineering works and ancillary buildings.

Location: Land at Elmstead Hall, Elmstead, Colchester

Ref: ESS/24/15/TEN

An Environmental Statement (ES) has been submitted with the application and examines the potential impact of the proposal on the natural and built environment and considers, where necessary, ameliorative measures to reduce and minimise that potential impact. The EIA process has been undertaken with respect to that part of the site where there are proposed changes. The application site (area edged red) includes an existing access track and part of an agricultural field. The assessment has been undertaken according to the Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 2011 and through the consultation process the ES has been revised as required and mitigation measures introduced either by amendments to the proposal or as suggested planning conditions. The assessment covers the following:-

Landscape

Cultural Heritage –Historic Buildings

Water – hydrology

Flood Risk

Ecology

Transport

Archaeology

Agriculture – Soils and Irrigation

Noise

Dust

Rights of Way

A summary of the potential effects assessed in the ES are set out below.

Landscape

The application footprint was recorded as being situated within the Tendring Plain, the character area identified in the Essex Landscape Character Assessment. The key characteristics for this character area are large flat farmland, dominated by arable farming, straight regular field patterns and widely dispersed woodland/copses.

The application proposals were considered to present a temporary visual impact through the physical presence of the perimeter bunds during site activity. There would be a permanent presence of the below ground reservoir once completed. The assessment notes that Hall Cottage already has filtered views and a proposed screen bund would further mitigate visual impact from this property.

In the long term, the report considers that the reservoir being of the “below ground” type would not be visible compared to the “above ground embankment” type.

The northern footpath would be separated from the reservoir site by a 2 metre high grassed bund.

There would be a new hedgerow proposed to the south, east and along the line of the northern bund once removed. A small copse would be established in the eastern half of the application area. The planting would be designed to reflect local landscape character.

Mitigation measures: Measures for mitigation include the placement of the plant and site activities behind grassed screen bunds and landscape planting. A landscaping scheme to address the type, size, planting and management regime could be secured through condition

Cultural Heritage – Historic Buildings

A Historic Buildings Assessment considered the potential impact on built heritage assets of Elmstead Hall and adjacent Church of St Anne and St Lawrence and acknowledging the close proximity to Hall Cottages, Allen's Farm and Parsonage Farm.

The report found that no historic fabric would be affected although the setting of Hall Cottages would most be affected and would be slightly so for Elmstead Hall and Church.

The assessment concluded that the industrial activities would be short lived compared to the historic history of the buildings themselves. Mitigation would be the provision of screen bunding.

The assessment considered the long term security arising from the presence of the reservoir ensuring the continuity of the agricultural landscape and introduction of features such as hedgerows and wooded areas being consistent with the historic landscape.

Water – Hydrology

A hydrogeological assessment comprising 18 mineral proving boreholes and 4 piezometres was undertaken. Sand and gravel was identified at base ranges from 5.8 – 9.2 metres below ground level with groundwater levels between 2 – 4 metres below ground level and below that available for vegetation use.

The assessment identified the presence of abstraction licences which included two private water supplies at Elmstead Hall and Hall Cottages (both under applicants control) the Church and Parsonage Farm located to the east and south east of the application footprint respectively. The assessment confirmed that there is no natural surface water features affected nor would there be direct discharge arising from the application.

The assessment did confirm that drawdown of groundwater was expected in the vicinity of the reservoir footprint out to 300 metres. As a result there were likely impacts arising on the supply of the existing identified adjacent abstraction points. The

assessment considered that potential mitigation would involve the use of the recharge trench and maintaining regular contact with owners of the wells concerned and installation of a mains supply if supply fails. Additionally, minimising the time period that excavation faces are kept open and temporary lining with low permeability liner or upper weathered layer of clays would assist in minimising water loss.

No designated features were identified in/vicinity of the application footprint nor is the application situated within the Environment Agency Source Protection Zone covering groundwater. The nearest watercourse lies some 700 metres to the east.

Mitigation matters

Any spills or leaks from operations during the site activity would be mitigated. For example vehicle would be maintained and inspected, fuels stored correctly and materials labelled. Sewages and waste would be appropriately disposed of or stored.

Comments: Conditions would be imposed to protect groundwater from contamination from the operations and require on site groundwater monitoring, reporting methods and provision for addressing mitigation if necessary of any impact upon sensitive receptors.

Flood Risk

A Flood Risk Assessment (FRA) was undertaken, as the application footprint was over the 1.5 hectare threshold for such assessment requirements. The FRA confirmed the application footprint as being within Flood Zone 1 (low probability of flooding) and that as a result it was considered there would be a low to negligible risk of natural cause flooding. The application footprint topography was identified as mainly level farmland 34 - 35m AOD with ground level decreasing east and south east to approximately 20 - 25m AOD offsite.

In considering impacts it was assessed that during construction the use of a recharge trench designed to the parameters proposed would accommodate the volume of water from both ground water and incidental rainfall.

Post completion the reservoir would have suitable freeboard available to accommodate rainfall/climate change predictions incorporating a freeboard of 1 metre around the lip of the reservoir to accommodate a 1 in 100 year flood event; any surface water runoff arising from surrounding grassed areas. The design would also accommodate rainfall intensities as a result of climate change taking on board the National Planning Policy Framework advice to accommodate 5% rainfall intensity between 1990 – 2025 rising to plus 20% 2055 – 2085 which would represent the lifespan of the reservoir.

The report noted that as no surface waters would be discharged off site the greenfield runoff rate (the situation as currently experienced) would not be exceeded and therefore the flood risk to surrounding area would not be increased.

Ecological Impact assessment

The ecology assessment comprised an Extended Phase 1 Survey with an updated survey finding that the land had low ecological value given its existing intense

agricultural use.

Ecological designated sites were noted as an SSSI identified over 2km to the South East and North West. Within 2 km of the application footprint lies a number of Local Wildlife Sites with the closest at 750 metres to the South East. There were no protected species identified within the footprint area nor were reptiles/amphibians recorded. The presence of bats was considered unlikely given lack of hedgerows present. The application would not result in any vegetation being removed and with the proposed planting and grassland/wetland provision there would likely be a net benefit to ecological interests.

Comments

A Construction Environmental Management Plan: Biodiversity (addressing biodiversity interests during construction) together with a Biodiversity Management Plan (post development completion) could be secured through condition.

Transport

A Transport Statement considered use of the same access road and routing plan as undertaken for the earlier Allen's Farm reservoir construction.

The traffic assessment confirmed that the road network had ample capacity to accommodate the predicted vehicle movements associated with the present application. Tye Road has suitable sightline provision and the 400 metre stretch of road before it joined the A133 Colchester Road had previously been widened to accommodate two way HGV associated with Allen's Farm reservoir. Access onto the A133 was considered suitable with appropriate sightlines and provision of a ghost right hand turn lane.

The assessment took account of an estimated 80 movements (40 in/40 out) as average with daily average calculated at 100 movements (50 in/50 out) and a worst case of 150 movements (75 in/75 out). The assessment confirmed that the A133 is designated a Main Distributor Road and this section operates well below practical capacity of 22,000 vehicles per day and any additional traffic as a result of this application could be adequately accommodated. It was not considered that there would need to be any on/off site road improvements required.

The statement concludes that the application proposal in terms of highways and transport aspects should be considered acceptable given the existing junction and infrastructure improvements were previously used for a similar use and were acceptable to the Highways Authority.

Comment: Signage for route direction for vehicles and maintenance of the access road could be secured by condition.

Archaeology

An Archaeological Desk Based Assessment was undertaken followed by an archaeological field evaluation of 28 trenches, in what is the northern part of the reservoir location and along the haul road.

The findings of the survey work identified the application footprint as having moderate probability of prehistoric remains with Bronze and Iron Age activity identified in the

north east corner and a concentration of crop marks centred around the adjacent Elmstead Hall. Some Roman pottery was located within the central part of the survey area. Overall the footprint had nothing of more than local significance and it was proposed that mitigation measures be undertaken ahead of construction.

There are no Schedule Monuments or other formally designated archaeological sites within the site.

Mitigation Methods include 'Preservation by record', monitoring and recording all soils during soil movement and excavations and further investigation of areas of interest identified.

Comments: A scheme to address archaeological investigation and recording could be secured by condition.

Agriculture – Soils and Irrigation

The agricultural assessments addressed the soil characteristics of the land with 12 core samples taken to precisely identify the ALC grading. A land survey was also undertaken with 123 core samples being tested. The soil classification for the land found the land footprint to exhibit majority Grade 2 some Grade 1 and a small element of Grade 3a land. The main limiting features of the soils were found to be stoniness and associated with this droughtiness. The assessments confirmed that there would be some net loss in land given most of the land associated with the application is classed as best and most versatile. It is considered that this loss, representing 1% of the overall 600 hectares comprising the interested land identified for irrigation. Any land loss would be compensated by the ability to irrigate the overall area with greater crop productivity to give a 10% yield increase.

The report found that the certainty of irrigation gives confidence in growing wider range of crops so achieving improved levels of home grown good produce. The report considered background design criteria and abstraction license requirements that are needed to be balanced in the reservoir design. The irrigation assessment needs confirm that the overall design takes account and would, in combination with the Allen's Farm reservoir supply 81% of the interested lands annual water requirements. The depth of the reservoir takes it to the London Clay that underlies the mineral and this would provide the water tightness and withstand the hydrostatic pressure from surrounding groundwater as the reservoir were drawn down.

Noise

A noise assessment undertaken assessed both the background levels as well as calculated "received" noise at 9 nearest representative residential properties against the "as raised" material being washed, regraded and removed off site. Result show with attenuation of distance/provision of screen bunds any changes in background remains within the criteria of NPPF Technical Advice on noise. The assessment confirmed that the A120 traffic dominates as the background noise for the application footprint.

Comments: A scheme for undertaking monitoring and the setting of noise generation

limits at locations representative of adjacent residential properties could be secured through condition.

Dust

The assessment noted that as a baseline the application footprint is already in agricultural use and that farming activities are an occasional dust generator. Whilst dust is unlikely to be produced by the excavation itself or aggregate processing, there may be potential for some airborne dust during soil stripping and trafficking on unsurfaced areas. Subject to windspeed and direction any dust arisings would be considered very localised.

The general wind direction is identified as South West so likely potential to carry dust towards Elmstead. Report noted that moisture content of mineral, bunding arrangements, good site practice and on site dust mitigation would be employed through use of a tractor and water bowser to minimise dust arisings. The assessment noted that the final reservoir would be resoiled around its banks and grassed with additional landscape planting.

Comments: Appropriate conditions could be imposed to secure dust management.

Rights of Way

Two footpaths would be affected; one PROW 162.2 along the northern site boundary and PROW 162.7 located to the south and runs parallel for some 200 metres of the internal haul road.

The assessment considered that the impacts on the northern footpath would be visual and noise and mitigation would comprise grassed screen bunding which in itself would limit views to the south assessed as a moderate visual impact.

The southern footpath would experience passing lorry disturbance considered to be intermittent and short term as lorry passes. Assessed impact would be more one of noise. No specific mitigation is proposed for the southern footpath.

Comments: provision of the grassed screen bunds; their management and maintenance could be secured by condition.