

# LONDON BOROUGH OF ENFIELD

## PLANNING COMMITTEE

Date : 24<sup>th</sup> November 2015

**Report of**

Assistant Director, Planning,  
Highways & Transportation

**Contact Officer:**

Andy Higham  
Sharon Davidson  
Mr Richard Laws

**Ward:**

Lower Edmonton

Ref: 15/03922/FUL

Category: Full Application

**LOCATION:** Deephams Sewage Works, Picketts Lock Lane, N9 0BA

**PROPOSAL:** Works in the south part of the site involving erection of 3 new buildings as part of the Deephams enhanced sludge digestion facility.

**Applicant Name & Address:**

Thames Water Utilities Ltd  
Clearwater Court  
Vastern Road  
Reading  
Berkshire  
RG1 8DB  
United Kingdom

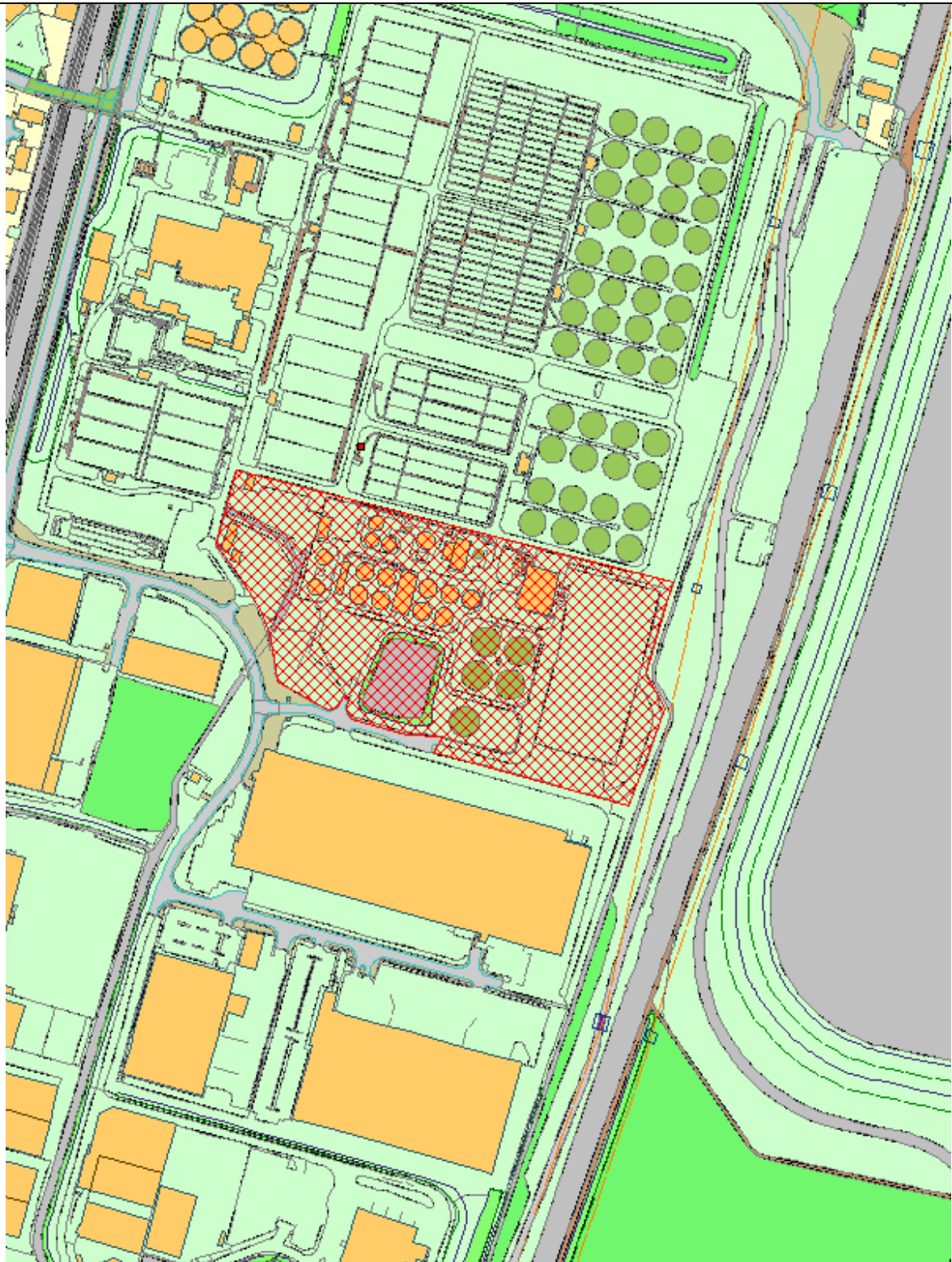
**Agent Name & Address:**

Mr Andy Blaxland  
7 St Peter Street  
Winchester  
Hampshire  
SO23 8BW  
United Kingdom

**RECOMMENDATION:**

That Planning Permission be **GRANTED** subject to conditions.

Ref: 15/03922/FUL LOCATION: Deephams Sewage Works, Picketts Lock Lane, N9 0BA,



Reproduced by permission of Ordnance Survey on behalf of HMSO. ©Crown Copyright and database right 2013. All Rights Reserved. Ordnance Survey License number 100019820

Scale 1:1250

North



## **1.0 Site and Surroundings**

- 1.1 Deepphams Sewage works is Thames Waters fourth largest sewage works. It treats sewage collected within its catchment and discharges effluent flows into Salmons Brook a tributary of the River Lee. Located off Picketts Lock Lane in Edmonton, the full extent of the sewage works is 34 hectares of land, the application site is sited on area occupying approximately 7 hectares of this larger site.
- 1.2 The sewage works is currently undergoing a major Upgrade works as part of planning permission granted in February 2015 (14/02612/FUL), which are currently being undertaken at the site at present. The Upgrade will meet the environmental permit requirements for the quality of the effluent (treated waste water) discharged from Deepphams Sewage Works into Salmons Brook. The Upgrade will also increase wastewater treatment capacity to accommodate population growth and improve the infrastructure at the sewage works much of which is over 50 years old. The Upgrade will also significantly reduce odour levels.

## **2.0 Proposal**

- 2.1 The Enhanced Sludge Digestion project is located on land in the southern part of the Deepphams Sewage works site. The application site currently comprises part of the Deepphams Sewage works site devoted to sludge treatment and sludge cake storages. It comprises of plant and equipment, together with large open air sludge cake storage pad, buildings open and enclosed digester tanks, gas bags and other equipment, and vacant land.

- 2.2 The proposal involves the erection of three new buildings as part of the Enhanced Sludge Digestion Facility at the sewage works.

A) A new combined CHP & THP low Voltage motor control building, this building will have a pitched roof with a height of 4.29m to eaves, and 5.65m to pitch. The footprint of the building will be 21.14m in length and 10.14m in width. The cladding of the walls will be profile sheet coloured grey.

B) A new steam generation building, this will have a pitched roof with a height of 6.425m to eaves and 8.25m to pitch. The footprint of this building will be 25.7m in length and 16.7m in width, the cladding of the walls and roof would be coated steel profile sheet coloured grey.

C) A new cake dewatering building is also proposed, this will have a pitched roof with a height of 14.43m to the eaves, and 15.9m to pitch. The footprint of the new dewatering building will be 38.6m in length and 16.76m in width.

- 2.3. The proposed development will enable Thames Water to:

- Treat additional volumes of sewage sludge generated as a result of population growth within the Deepphams catchment;
- Treat the sewage sludge to higher environmental standards;
- Reduce the volume of sludge cake produced, as a result of the improved digestion process, and the volume requiring transport off site for recycling to agricultural land, and
- Recover more biogas and convert this to electricity to help run the sewage

treatment processes on site and reduce reliance on the National Grid.

- 2.4 The proposed development will collect sludge produced by the primary and secondary treatment processes within the sewage works. Following straining and blending to remove any remaining material such as rag, the sludge will be transferred to centrifuges for thickening and to reduce its water content. The thickened sludge is then transferred into the Thermal Hydrolysis Plant (THP) for high temperature treatment before being passed into the existing anaerobic digesters. The biogas produced by the digestion process is collected and used to power an additional 1.56 MW CHP engine, together with the two CHP engines being installed as part of the Upgrade works (Planning Application ref: 14/02612/FUL) that will generate heat for use in the THP process and electricity, reducing the need for the site to receive power from the national grid.
- 2.5 The digested sludge is then dewatered in presses to reduce its water content and stored on the existing sludge cake storage pad prior to transport off site to be recycled to agricultural land. The cake storage pad will provide capacity for up to 70 days sludge production (approximately 11,500m<sup>3</sup> of sludge cake) which is in accordance with Thames Water's standard requirements to ensure sufficient space is available for occasions when sludge cannot be take onto agricultural land (e.g. due to adverse weather conditions).
- 2.6 The sludge liquors arising from dewatering will be returned to the main sewage treatment works for further treatment, the same as for the existing processes. The thermal hydrolysis process, siloxane filter regeneration on the CHP engine and digested sludge dewatering building will all be odour controlled.
- 2.7 The completed enhanced sludge digestion facility will be operational 24 hours a day, days a week, in line with the rest of the sewage process. Construction of the Enhanced Sludge Digestion Facility is planned to commence in Autumn 2016 with works completing in early 2019. Once the new sludge treatment process is operational the existing 5 secondary digesters will be demolished as these will no longer be required.

### **3.0 Relevant Planning Decisions**

- 3.1 15/01701/S0- Environmental Impact Assessment Screening Opinion request under the Town and Country Planning (Environmental Impact Assessment ) ( England & Wales) Regulations 2011, as amended 2015, for installation of enhanced sludge digestion to existing sludge treatment facilities- Screening opinion concluded that proposal does not constitute EIA Development.
- 3.2 14/02612/FUL- Upgrade of sewage infrastructure, including phased development of primary settlement tanks, aeration lanes, final settlement tanks, pumping station, blower house, secondary digesters and ancillary buildings- approved 20:02:2105
- 3.3 P14-00525SOR -Request for a Scoping Opinion in respect of proposals for Deephams Sewage Works Upgrade. Scoping Opinion request given by the LPA on the 25/4/14.

- 3.4 P14-00100SOR- Request for a Screening Opinion- Regulation 5 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 for the demolition of redundant Digesters & Associated Plant and partial culverting, re-profiling and diversion of Enfield Ditch Tributary- Screening Opinion issued confirming not EIA development 10/ 2/14.
- 3.5 P14-00097 PRI- Demolition of redundant pumping station building and redundant single storey switch gear building- Prior Approval not required 10/2/14.
- 3.6. Various notification works regarding the intention to undertake works under permitted development on the site.

#### **4.0 Consultations**

##### **4.1 Statutory and non-statutory consultees**

###### Tree Officer

- 4.1.1 No objections raised.

###### Environmental Health

- 4.1.2 Does not object to the application for planning permission as there is unlikely to be a negative environmental impact. In particular there are no concerns regarding air quality, noise or contaminated land. The application contains sufficient information in terms of noise, air quality, and odour and dust control from demolition and construction activities. The noise report sets out in detail the noise likely to be generated from construction and operation of the new plant. The methodology used and the results are robust and the conclusions accepted. The odour report demonstrated that the odour arising from the new plant will be less odorous than the existing installation which fits in with the upgrade of the rest of the site. A condition is required to ensure the methodology for controlling dust and emissions, detailed in the construction management plan submitted with the application, is employed during the works on site to install the new plant and buildings.

###### Traffic and Transportation

- 4.1.3 No objections subject to a Construction travel plan & traffic management plan.

###### Canal & River Trust

- 4.1.4 No objection to the proposed development.

###### Environment Agency

- 4.1.5 They have no objections to the proposals as the development falls outside the extent of the modelled 1 in 100 chance in any year flood event, taking the impacts of climate change into account. They have reviewed the supporting flood risk data and don't consider that there are grounds for objection. With regards to surface water drainage, although they commented on the drainage strategy for the application for the main upgrade works, as this is a new application they are happy to defer the assessment of the drainage proposals the authority in its capacity as lead local flood authority.

#### English Heritage (Archaeological)

- 4.1.6 The site lies within an area where heritage assets of archaeological interest may lie. Appraisal of this application indicate that the development would not cause sufficient harm to justify refusal of planning permission provided a condition is applied to require an investigation to be undertaken to advance understanding.

#### Lee Valley Regional Park Authority

- 4.1.7 If planning permission is granted a condition is required requiring strict adherence to the proposed landscape strategy involving management and maintenance of the landscape belts to ensure their effectiveness in screening the development.

#### London Fire & Emergency Planning Authority

- 4.1.8 The brigade is satisfied with the proposals for firefighting access subject to compliance with Part B5 of the Building Regulations.

## **4.2 Public**

A total of 54 surrounding properties were consulted in addition 2 site notices were displayed. 1 letter of concern/objection was received raising the following points.

- Concerned about the impact of smell from the sludge and indication of any impact of smell from the buildings
- Concerns about dust and hours of work

## **5.0 Relevant Policy**

### 5.1 The London Plan (Consolidated With Alterations Since 2011) March 2015

- 5.2 The London Plan is the overall strategic plan for London, setting out an integrated economic, environmental, transport and social framework for the development of London over the next 20–25 years. Since the 2011 plan was published in July of that year, revised early minor alterations (REMA) were made to ensure it reflected the National Planning Policy Framework and the Government's approach to affordable housing. These were formally published on 11<sup>th</sup> October 2013. Draft further alterations to the London Plan (FALP) were published for public consultation in January 2014 to reflect Mayoral priorities set out in his *2020 Vision: The Greatest City on Earth – Ambitions for London*, particularly the need to plan for the housing and economic capacity, needed for London's sustainable development against the background of the growth trends revealed by the 2011 Census. These have now been incorporated, along with the changes made by the REMA, into the consolidated London Plan which was published in March 2015.

- 5.3 The following policies are considered pertinent to the assessment of this application:

Policy 1.1	Delivering the Strategic Vision & Objectives of London
Policy 2.2	London & the wider Metropolitan area
Policy 2.6	Outer London: Vision & Strategy
Policy 2.13	Outer London: economy
Policy 2.18	Green Infrastructure

Policy 3.2	Improving Health & Addressing Equality
Policy 5.1	Climate change mitigation
Policy 5.2	Minimising carbon dioxide emissions
Policy 5.3	Sustainable design and construction
Policy 5.5	Decentralised energy Networks
Policy 5.6	Decentralised energy in development proposals
Policy 5.7	Renewable energy
Policy 5.9	Overheating and cooling
Policy 5.10	Urban greening
Policy 5.11	Green roofs and development site environs
Policy 5.12	Flood Risk Management
Policy 5.13	Sustainable drainage
Policy 5.14	Water quality and wastewater infrastructure
Policy 5.16	Waste Self sufficiency
Policy 5.17	Waste Capacity
Policy 5.18	Construction, excavation & demolition waste
Policy 5.20	Aggregates
Policy 5.21	Contaminated Land
Policy 6.1	Transport- Strategic Approach
Policy 6.3	Assessing the effects of development on transport capacity
Policy 6.9	Cycling
Policy 6.10	Walking
Policy 6.12	Road network capacity
Policy 6.13	Parking
Policy 6.14	Freight
Policy 7.1	Building London's neighbourhoods and communities
Policy 7.2	An inclusive environment
Policy 7.3	Designing out crime
Policy 7.4	Local character
Policy 7.5	Public Realm
Policy 7.6	Architecture
Policy 7.8	Heritage Assests and Archaeology
Policy 7.13	Safety, Security & Resilience to Emergency
Policy 7.14	Improving air quality
Policy 7.15	Reducing noise and enhancing soundscapes
Policy 7.16	Green Belt
Policy 7.19	Biodiversity and access to nature
Policy 7.21	Trees & woodlands
Policy 7.24	Blue Ribbon Network
Policy 7.26	Increasing the use of the Blue Ribbon Network for Freight Transport
Policy7.27	Blue Ribbon Network Infrastructure & recreational use
Policy 7.28	Restoration of the Blue Ribbon Network
Policy 7.30	London's canals and other rivers and water spaces
Policy 8.2	Planning Obligations
Policy 8.3	London's canals and other rivers and water spaces

## 5.5 Local Plan – Core Strategy

CP 1	Strategic Growth Areas
CP20	Sustainable energy use and energy infrastructure
CP21	Delivering sustainable water supply, drainage and sewerage infrastructure

CP22 Delivering sustainable waste management  
 CP24 The Road Network  
 CP25 Pedestrians and cyclists  
 CP28 Managing Flood Risk through development  
 CP29 Flood Management Infrastructure  
 CP30: Maintaining and improving the quality of the built and open environment  
 CP31 Built and Landscape Heritage  
 CP32: Pollution  
 CP33 Green Belt and Country Side  
 CP35 Lee Valley Regional Park and waterways  
 CP36: Biodiversity  
 CP37 Central Leaside  
 CP38 Meridian water  
 CP39 Edmonton  
 CP40 North East Enfield  
 CP46 Infrastructure contributions

Development Management Document (DMD) adopted Nov 2014

DMD37 Achieving High Quality and Design-Led Development  
 DMD38 Design Process  
 DMD44 Preserving and Enhancing Heritage assets  
 DMD45 Parking Standards and Layout  
 DMD47 New Road, Access and Servicing  
 DMD48 Transport Assessments  
 DMD49 Sustainable Design and Construction Statements  
 DMD50 Environmental Assessments Method  
 DMD51 Energy Efficiency Standards  
 DMD52 Decentralised Energy Networks  
 DMD53 Low and Zero Carbon Technology  
 DMD54 Allowable solutions  
 DMD55 Use of Roof space/ Vertical Surfaces  
 DMD56 Heating & Cooling  
 DMD57 Responsible Sourcing of Materials, Waste Minimisation  
 DMD58 Water Efficiency  
 DMD59 Avoiding and Reducing Flood Risk  
 DMD60 Assessing Flood Risk  
 DMD61 Managing surface water  
 DMD62 Flood Control Mitigation  
 DMD63 Protection & Improvements of Watercourses & Flood defences  
 DMD64 Pollution Control and Assessment  
 DMD65 Air Quality  
 DMD66 Land Contamination & Instability  
 DMD68 Noise  
 DMD69 Light Pollution  
 DMD 70 Water quality  
 DMD 75 Waterways  
 DMD 76 Wildlife Corridors  
 DMD 77 Green Chains  
 DMD 78 Nature Conservation  
 DMD79 Ecological Enhancements  
 DMD80 Trees on development sites  
 DMD81 Landscaping



## 5.8 Other Relevant Considerations

National Planning Policy Framework (NPPF) March 2012  
National Policy Statement for Waste Water March 2012  
Future Water- The Government Strategy for England  
National Planning Policy for Waste (October 2014)  
Water for Life- Government's White Paper on Water  
Water Act (May 2014)  
Defra's Strategic Policy Statement to Ofwat- Incorporating Social & Environmental Guidance (May 2013)  
The Mayor's Water Strategy: Securing London's Water Future (2011)  
Circular 17/91- Water Industry Investment: Planning Considerations  
Circular06/05- Biodiversity & Geological Conservation  
Upper Lee Valley Opportunity Area Planning Framework (July 2013)  
Central Leaside Area Action Plan (Proposed Submission)  
Meridian Water Master Plan, Planning & Urban Design Guidance  
Section 106 Supplementary Planning Document (November 2011)

## 6.0 **Analysis**

### 6.1 Principle of Development

6.1.1 Thames water is required to ensure that its facilities for treating wastewater sludge are able to meet the demands placed upon them by population growth, climate change and stricter environmental regulations. To meet the overall aims of sludge treatment In North London the strategy has been to provide enhanced digestion technology .This current proposal will:

- Reduce quantities of sludge to be transported off site for recycling to agricultural land
- Reduce odour sometimes attributed to applying sludge to land
- Potentially widen accessibility to other land types for sludge cake disposal

6.1.2 In both " Future Water" The Governments Water Strategy for England 2008 and "Water for Life the Governments White Paper on Water 2011, recognises that improving sewage systems is fundamental to the quality and ecology of the water environment, meeting the needs of a growing population and addressing climate change. In addition the NPPF urges local authorities to ensure that supporting infrastructure is of sufficient quality and capacity to meet forecast demands. The principle of the proposed development is further supported by Policy 5.14 of the London Plan to ensure that London has adequate and appropriate infrastructure to meet the requirements placed upon it by population growth and climate change, and to protect and improve water quality. Core Policy CP21 also advises that in order to "improve water quality in the Borough during the life of this Plan, Thames Water plan to improve/ redevelop Deephams Sewage Treatment works. The core strategy notes that the Borough is committed to delivering sustainable water infrastructure and intends to work with water companies to ensure that Enfield's future wastewater treatment needs are managed effectively in a coordinated manner. Paragraph 8.4.5 of the DMD states that a major upgrade is being planned for the Deephams Sewage works during the plan period, to meet new environmental standards and also to accommodate growth within the catchment area. The principal of the Enhanced Sludge Digester Facility is supported as being necessary to deliver infrastructure to

meet existing and future wastewater demands. The principle of the proposal is therefore supported by planning policy.

## 6.2 Odour/ Air Quality

6.2.1 An odour assessment has been undertaken of the Enhanced Sludge Digestion project. The project will result in a further reduction in odour emissions from the works. This further reduction is achieved through the improvement in the quality of sludge cake, a reduction in the volume of sludge cake stored, the demolition of what will become the secondary digesters, and the implementation of two additional control units. These further reductions also need to be seen in the context of the very significant reductions in odour as a result of the Upgrade project implementation.

6.2.2 Environmental Health advise that the odour report demonstrates that the odour arising from the new plant will be less odorous than the existing installation which fits in with the upgrade of the rest of the site. A condition is required to ensure the methodology for controlling dust and emissions, detailed in the construction management plan submitted with the application, is employed during the works on site to install the new plant and buildings.

6.2.3 An Odour Management Plan for the site during construction of the Deephams Sewage Upgrade, and for its future operation is secured through planning conditions on the upgrade planning permission. That Odour Management Plan will be updated to incorporate the implementation of the Enhanced Sludge Digestion project, this can be appropriately conditioned. It is considered that the proposal would have appropriate regard to CP 32 and DMD 65.

6.2.4 An air quality assessment has also been undertaken of the Enhanced Sludge Digestion scheme and the assessment concludes that it would not change the conclusions of the detailed air quality assessment undertaken for the proposed Sewage works Upgrade. No objections are raised by Environmental Health in terms of air quality regarding the proposal.

## 6.3 Impact on Residential Amenity

6.3.1 It is not considered that the siting of the three proposed buildings would adversely impact on the residential amenities of properties within the vicinity, given their siting and distance within the site. The closest premises to the new buildings for the Enhanced Sludge Facility are Industrial building in Adra Road and it is not considered that that they were would be adversely impact by the buildings.

## 6.4 Traffic Generation /Parking and Highway Safety

6.4.1 A Transport statement together with a Construction Logistics Plan and a Construction Travel Plan has been submitted with the application. During the construction phase of the Deephams Sewage Works Upgrade (already approved and works underway) a dedicated construction compound has been provided by the main Picketts lock Lane entrance site. This compound would also be utilised for the construction of the Enhanced Sludge Digestion Facility. This compound area provides 160 dedicated car parking spaces, including 3 disabled bays and 20 cycle parking spaces.

6.4.2 As the Enhanced Sludge Digester (ESD) facility is to be constructed at the same time as the Deephams Sewage Upgrade, the Transport Statement also considers the potential combined effects of the two projects. The peak construction traffic for the

Upgrade project will occur during Phase 2, the construction of wastewater treatment stream A. The peak in traffic during that phase will have ended before the construction of the Enhanced Sludge Digestion facility commences. The assessment is that thereafter, as the latter Upgrade phases are constructed and the ESD Facility is built, the combined traffic would still be less than the Upgrade Phase 2 peak. Accordingly, it is not considered that the combined construction traffic would give rise to unacceptable impacts in transport terms.

- 6.4.3 Once complete there would also be a reduction in operational traffic movements from the site, as the Enhanced Sludge Digestion process would result in less sludge being produced for recycling, which requires off site transport to agricultural land. There would be no change to the operational staff on site following the construction of the buildings.

## 6.5 Design / Landscape Character

- 6.5.1 Core Policy CP 30 requires all new developments to be high quality and design led having regard to their context. London Plan Policies 7.1, 7.4 and 7.6 are also relevant regarding design, character and appearance. DMD37 also refers to achieving High quality and design led development. The proposed buildings will be seen in the context of the existing sewage treatment infrastructure and operations and are considered to be of a scale comparable to the existing infrastructure and buildings on site. The buildings will be seen in the context of the existing industrial landscape from near and distant views. Whilst the largest building (the new cake dewatering Building) will have a footprint of 38.6m in length by 16.76m in width with a height of 15.9m, given the scale of the site and the complex of surrounding industrial buildings in Adra Road, it is not considered the proposal would have any significant impact on the surrounding area.
- 6.5.2 The proposed three new buildings are functional in terms of their design and would mimic the industrial architecture present on site, in particular the large scale warehousing buildings located immediately to the south. Materials and colours for these new buildings would be grey so as to fit in with the existing industrial landscape of the site. Overall the design and appearance of the buildings are acceptable in policy terms.
- 6.5.3 In terms of impact on landscape/ visual character, the proposed is already located within the developed Deephams Sewage works and is within a belt of industrial development. Accordingly it is considered similar in scale and character to the existing land uses, with the area consisting of large building and hard standings, with limited vegetation. Industrial estates are located to the south of the proposed development. Accordingly, it is not considered that the proposal would result in any significant effects on the landscape character of the site, the surrounding industrial character or the Lee Valley character Area.
- 6.5.4 Whilst the new dewatering building would be visible in glimpsed views, it is considered that they would not be significantly different from the existing views of the industrial and warehousing buildings located to the south. The new building and other permitted developments will be seen within the industrial context of the surroundings. The landscape strategy and associated landscape plans indicate new planting along the eastern boundary with taller native trees, hedgerows and shrubs. Existing trees to be retained will be protected by protective fencing during the construction period.

6.5.5 While the scale of the development is substantial, when viewed in the context of the wider site and the upgrade works currently being undertaken, it is not considered that this proposed development would have any significant visual impact on the adjacent Green belt, having regard to London Plan Policy 7.16 and CP33. None of the site itself is situated within the green belt.

## 6.6 Sustainable Design / Energy

6.6.1 The London Plan Climate change policies require developments to make the fullest contributions to tackling climate change by minimising carbon dioxide emissions, adopting sustainable design and construction, prioritising decentralised energy and incorporating renewable energy. The following policies of the London Plan are of particular relevance 5.1, 5.2, 5.3, 5.5, 5.6, 5.7, 5.8, 5.9, and 5.18. In addition Core Policy 20 (Sustainable Energy & Energy Infrastructure), is also applicable. In addition Sustainability and Energy Development Management Document Policies DMD 51, 52, 53, 55, are also relevant. The applicants have submitted both a Sustainability Statement and Energy Statement with the application.

6.6.2 The proposed Enhanced Sludge Digestion facility will produce additional biogas, from an equivalent sludge volume, which will be collected and stored in gas holders, and used to feed the proposed CHP for on-site electricity generation and provision of heat to the digestion process.

6.6.3 The energy statement identifies that the energy (electricity and heat) generation from renewable fuel CHP is estimated to reduce the carbon footprint by approximately 5,960 tonnes of CO<sub>2</sub> emissions per annum within the context of the baseline for the Upgraded (ESD) works. This CO<sub>2</sub> reduction outweighs the additional loads that are anticipated at the site and will allow Thames Water to achieve an overall reduction of Carbon emissions at the Deephams site of 81%, which is significantly above the 35% reduction required by Policy 5.2 of the London Plan.

## 6.7 Biodiversity /Trees/Landscaping

6.7.1 The majority of the site is previously developed land, containing sewage treatment infrastructure and therefore has limited ecology and nature conservation interest. The main features of ecological interest are found along the periphery of the site along the eastern boundary. The Lea Valley Site of Metropolitan Importance Nature Conservation (SMINC) is adjacent the site. However, the development does not propose any works within the SMINC boundary and there will be no direct impact upon the SMINC.

6.7.2 There is a small limited removal of scrub although this is identified as being of low biodiversity value. The landscape strategy proposes that existing vegetation along the eastern boundary of the development will be supplemented with taller native trees, hedgerows and shrubs to enhance biodiversity and habitat connectivity. This will also provide additional screening of the building to people using the Lee Park Way and River Lee Navigation. The additional planting and habitat enhancement is considered to have appropriate regard to DMD 80 and 81 as well as London Plan Policies 7.19 and 7.28

## 6.8 Flooding/ Surface Water

6.8.1 A detailed Flood Risk Assessment (FRA) has been submitted with the application . The FRA concludes that based upon the most recent modelling it is anticipated that the works would not increase the fluvial flood risk on the site or elsewhere. No

objections to the proposal are raised by the Environment Agency in terms of flood risk. In terms of surface water a sustainable drainage strategy will be secured by an appropriately condition so as to follow the drainage hierarchy in the London Plan as well as having regard to DMD61 which will include information on storage volumes and direction of flows.

## 6.9 Community Infrastructure Levy

6.9.1 As of April 2010, legislation in the form of CIL Regulation 2010 (as amended) came into force which would allow “charging authorities” in England and Wales to apportion a levy on the net additional floor space for certain types of qualifying development to enable the funding of a wide range of infrastructure that is need as a result of development. Since April 2012 the Mayor of London has been charging CIL in Enfield at a rate of £20 per sqm.

6.9.2 The three new buildings that will be constructed are exempt from CIL payment as they are classed as buildings into which people” do not normally go” e.g. buildings containing plant etc. that would only visited for maintenance

## 7. **Conclusion**

7.1 The proposed three buildings are considered acceptable in terms of their form, design and scale having regard to their location within the Deephams sewage works site and their surrounding context. It is not considered that the proposals would give rise to any adverse environmental effects during the construction and there will also be an appropriate Construction Environment Management Plan.

7.2 Once complete the proposal will improve the quality and reduce the quantity of sludge cake that is produced and taken off site to be spread on agricultural land. There will be a reduction in operational vehicle movements following the completion of the development. The proposal will also significantly increase the biogas generation from the sludge treatment process leading to an increase in renewable energy generation. There will also be a reduction in odour emissions from the site. In addition new landscaping is proposed to enhance the existing boundary vegetation on the eastern boundary of the site where it abuts the Lee Valley Regional Park and Green Belt, which will also include biodiversity enhancements.

7.3 The proposed development meets a clear statutory need within an existing operational sewage works and is considered acceptable in policy terms.

Recommendation: That Planning Permission be GRANTED subject to the following Conditions:

1. C60- Approved Plans
2. C7- Details of Materials
3. C10 -Details of Levels
4. Archaeology

(A) No development shall take place until the applicant (or their heirs and successors in title) has secured the implementation of a programme of archaeological

investigation in accordance with a written Scheme of Investigation which has been submitted by the applicant and approved by the Local Planning Authority in writing.

(B) No development or demolition shall take place other than that in accordance with the Written Scheme of Investigation approved under Part (A);

(C) The development shall not be occupied until the site investigation and post investigation assessment has been completed in accordance with the programme set out in the Written Scheme of Investigation approved under part (A) , and the provision made for analysis , publication and dissemination of the results and archive deposition of results.

Reason: Heritage assets of archaeological interest are expected to survive on the site. The Planning authority wishes to secure the provision of appropriate archaeological investigation, including the publication of results.

## 5. Sustainable Drainage System

Prior to the commencement of development a Sustainable Drainage Strategy shall be submitted to and approved in writing by the LPA. The Sustainable Drainage Strategy shall include the following:

- A Plan of the existing site
- A topographical Plan of the area
- Plans and drawings of the proposed site layout identifying the footprint of the area being drained ( Including all buildings, access roads and car parks)
- The controlled discharge rate for a 1 in 1 year event and a 1 in 100 year event ( with an allowance for climate change), this should be based on the estimated greenfield runoff rate
- The proposed storage volume
- Information on proposed SuDS measures with a design statement describing how the proposed measures manage surface water as close to its source as possible and follow the drainage hierarchy in the London Plan.
- Geological information including borehole logs, depth to water table and/ or infiltration test results
- Details of overland flow routes for exceedance events
- A management plan for future maintenance

Reason: To ensure that the proposal has appropriate regard and Development Plan Document Policy DMD61 in providing a Sustainable Drainage Strategy.

## 6. Landscape Strategy

The proposed landscaping shall accord with “ Deephams Sewage Works Enhanced Sludge Digestion Facility “ Landscape Strategy Final report August 2015 including the landscaping plan Drawing 230 A..

Reason: to ensure the provision of a satisfactory landscaping Scheme and in the interests of visual amenity and biodiversity.

7. Updated Construction Environmental Management Plan

Prior to the commencement of development an updated Construction Environment Management Plan (CEMP) for the existing Upgrade works to also include the Enhanced Sludge Digestion Facility shall be submitted to and approved in written by the Local Planning Authority. The updated CEMP shall be regularly monitored and reviewed.

Reason: To ensure that the development does not lead to damage to the existing highway and to minimise disruption to surrounding neighbours.

8. Ecological Enhancements

The biodiversity measures and enhancements shall accord with Ecology report "Ecological Site Improvements & Species Protection final Report " August 2015.

Reason: To ensure biodiversity enhancements having regard to Core Strategy Policy CP36 and DMD 79 of the Development management document.

9. Updated Odour Management Plan

An updated Odour management plan to incorporate the implementation of the Sludge Digester Facility shall be submitted to and approved in writing by the LPA and thereafter adhered to. The Updated Odour management Plan shall include include measures to ensure regular monitoring and review of odour emissions from the Odour Control units, in consultation with LB Environmental Health Officers to ensure the predicted reduction in odour emissions from the completed development.

Reason: To ensure that the proposed development minimises and reduces odour having regard to Policy 7.14 of the London Plan, Core Strategy cP32 and Development management Document Policies DMDD64 and 6

10. Construction and Logistics plan

Prior to the commencement of development and updated Construction and Logistics Plan (CLP) shall be submitted to and approved in writing by the LPA and there after adhered to during the works.

Reason: In order to minimise the impact of the development on the surrounding highway network, in addition to setting out how the construction site and its operation will be managed.

11. Sustainability / Energy

The development shall be implemented in accordance with Energy Statement and Sustainability Statement Final Reports 2015.

Reason : In the interests of sustainable development and to ensure that the Local Planning authority may be satisfied that CO2 reduction targets are met in accordance with Policy Cp20 of the Core Strategy, DMd51 of the Development Management Document, Policies 5.2,5.3,5.7 and 5.9 of the London Plan2011 including alterations.

12. Details of Contamination

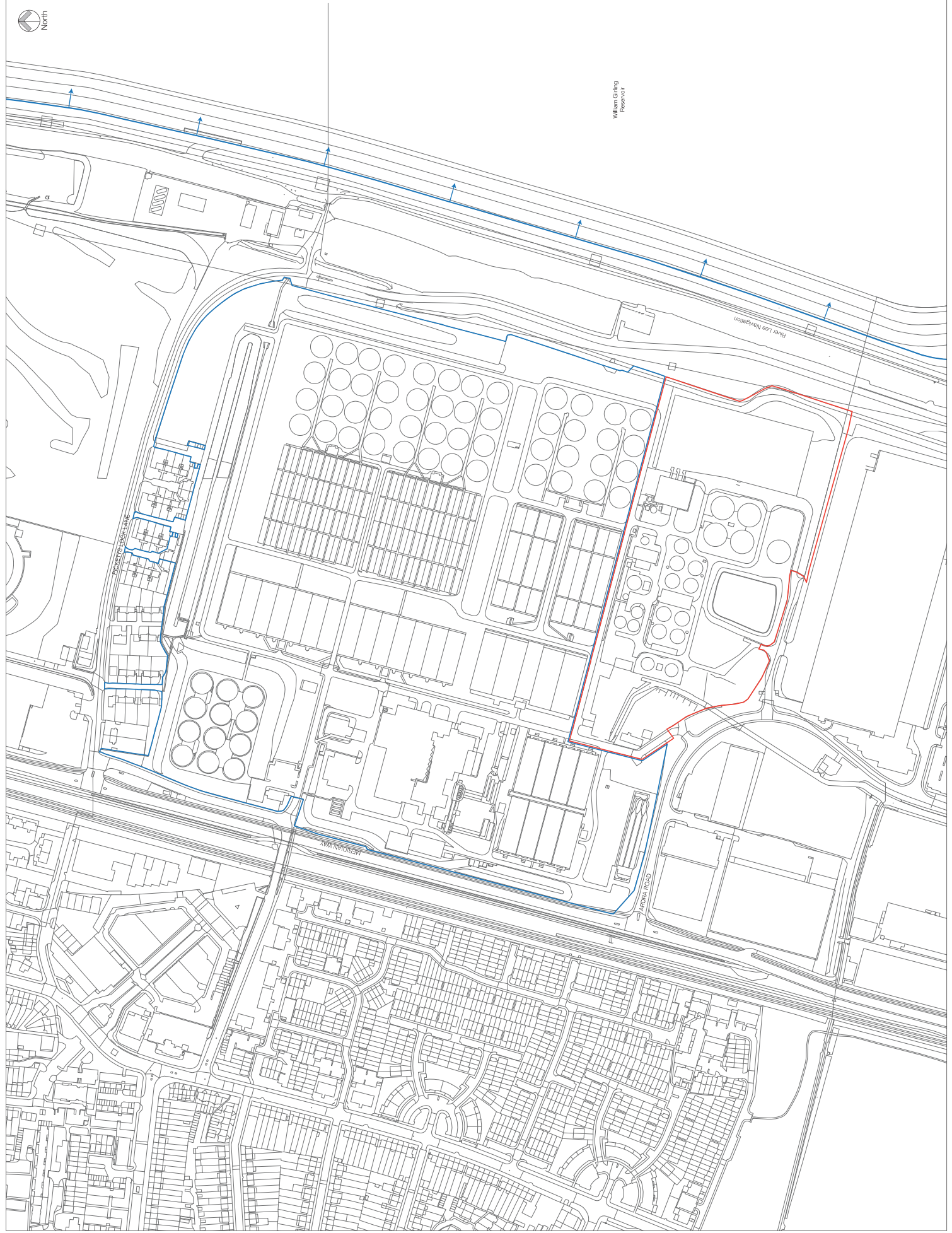
13. C51 A- time Limit





NORTH

KEY  
 Planning application area  
 Other land in the ownership of the applicant



William Gullig Reservoir

River Lee Navigation

WICKENS ROAD

MERRIDIAN WAY

ARDRA ROAD

THAMES WATER  
SHEPPARS SEWAGE TREATMENT WORKS  
ENHANCED SLUDGE HANDLING

Planning Drawing Number: ANCI-THP-002  
**APPLICATION AREA &  
LAND OWNERSHIP**

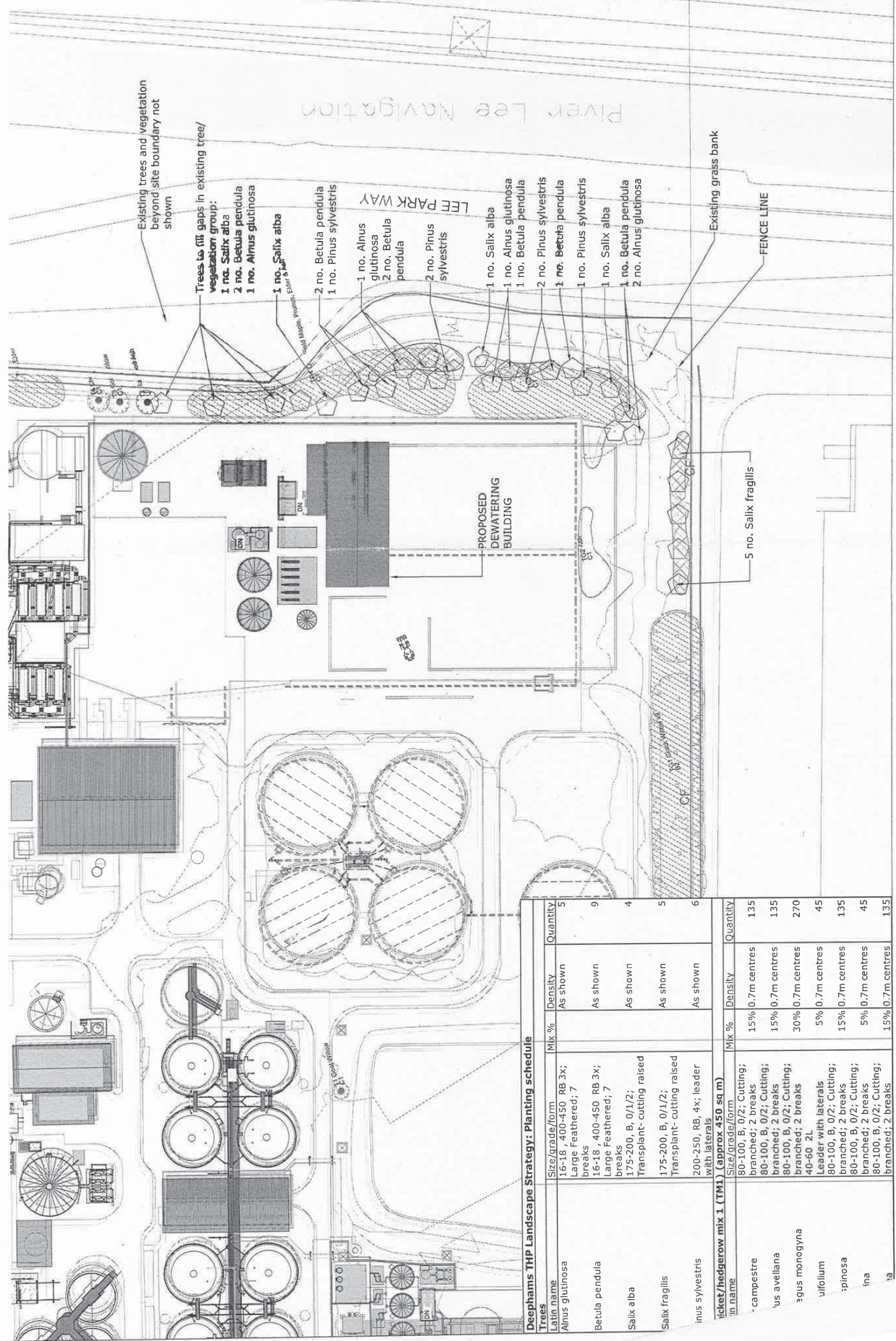
Drawn by:	TJ/DCS/TP/002	Checked by:	A
Checked by:	AKC	Scale:	1:5000 A3
Date:	15/09/2016	Scale:	1:5000 A3

© Crown Copyright. All Rights Reserved. Ordnance Survey Licence No. 100019165





Figure 2: Proposed landscape plan



**NOTES:**  
 1. Do not scale from drawings.  
 2. All dimensions must be checked on site and per discrepancies.  
 3. All dimensions are shown in mm.  
 4. All dimensions are shown in mm.  
 5. All measurements must be as specified alternatives to be approved by the client.

**Key**

Please refer to **Tamla Trees** report for details

- Category A - Trees of high quality
- Category B - moderate quality
- Category C - low quality
- Category U - Dead, Dying or Defect trees with <30 years retention value

RPA - root protection area as defined by Table 2 BS 5837:2012

- Existing trees retained
- Tree to be removed to facilitate development
- Proposed tree planting
- Proposed thick/hedgerow planting (TM1 - see Planting Schedule)

- KEY TO LINES:**
- PLANNING APPLICATION AREA
  - EXISTING STRUCTURES
  - STRUCTURES DEMOLISHED
  - PROPOSED WORKS - PERMITTED DEVELOPMENT
  - PROPOSED WORKS - REQUIRING PLANNING PERMISSION



1:1	1:1	1:1	1:1	1:1	1:1
1:1	1:1	1:1	1:1	1:1	1:1
1:1	1:1	1:1	1:1	1:1	1:1
1:1	1:1	1:1	1:1	1:1	1:1
1:1	1:1	1:1	1:1	1:1	1:1
1:1	1:1	1:1	1:1	1:1	1:1

**LUC**  
 45 Chalfont Street  
 London E1 3AP  
 T: 020 7883 5790  
 F: 020 7883 6798  
 luc@luc-ltd.co.uk  
 www.luc-ltd.co.uk

Project: DEEPHAMS SW Upgrade  
 Client: THAMES WATER  
 Title: Draft  
 Date: THP - Landscape Plan  
 Scale: 1:500@A1  
 Job No: 5989  
 Date: 23/01/20  
 Issue: A

Deephams THP Landscape Strategy: Planting schedule			
Trees	Size/grade/form	Mix %	Quantity
Alnus glutinosa	16-18, 400-450 RB 3x; Large Feathered; 7	As shown	5
Betula pendula	16-18, 400-450 RB 3x; Large Feathered; 7	As shown	9
Salix alba	175-200, B, 0/1/2; Transplant - cutting raised	As shown	4
Salix fragilis	175-200, B, 0/1/2; Transplant - cutting raised	As shown	5
Pinus sylvestris	200-250, RB, 4x; leader with laterals	As shown	6
Ticket/hedgerow mix 1 (TM1) (approx 450 sq m)			
Plant name	Size/grade/form	Mix %	Quantity
Campanula	80-100, B, 0/2; Cutting; branched; 2 breaks	15% 0.7m centres	135
Salix avellana	80-100, B, 0/2; Cutting; branched; 2 breaks	15% 0.7m centres	135
Salix monogyna	80-100, B, 0/2; Cutting; branched; 2 breaks	30% 0.7m centres	270
Salix viminalis	40-60 2L	5% 0.7m centres	45
Salix pinosa	80-100, B, 0/2; Cutting; branched; 2 breaks	15% 0.7m centres	135
Salix na	80-100, B, 0/2; Cutting; branched; 2 breaks	5% 0.7m centres	45
Salix na	80-100, B, 0/2; Cutting; branched; 2 breaks	15% 0.7m centres	135

**PLANNING APPLICATION DRAWING  
 NUMBER AMK-THP-004**

ALCOB Project Ref:

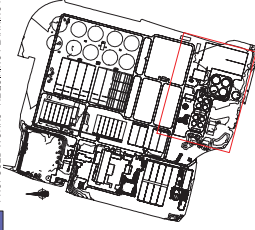
**NOTES**

**KEY TO PROJECT STRUCTURES**

1. PRIMARY SETTLEMENT TANKS (PST)
2. ACTIVATED SLUDGE PLANT (ASP)
3. TERTIARY TREATMENT PLANT (TTP)
4. TTP ACO. RISER
5. TTP ACO. WORKING STATION
6. SWS BUFFER TANK
7. SWS BUFFER TANKS
8. SWS BUFFER TANKS
9. SWS BUFFER TANKS
10. AQUARIET BUILDINGS
11. NEW ACTIVATED SLUDGE TRANSFER PUMPS (IN AQUARIET BUILDING)
12. SLUDGE BUFFER TANKS
13. SLUDGE BUFFER TANKS
14. GAS HOLDERS
15. GAS HOLDERS
16. COOLING TOWER
17. COOLING TOWER
18. COOLING TOWER
19. COOLING TOWER
20. COOLING TOWER
21. COOLING TOWER
22. WASHWATER RISER
23. PRIMARY SLUDGE TRANSFER PUMPS TO THP
24. PRIMARY SLUDGE TRANSFER PUMPS TO THP
25. PRIMARY SLUDGE TRANSFER PUMPS TO THP
26. GAS STORAGE GAS RIG PARADAY CAGE
27. FLARE STACK
28. FLARE STACK
29. FLARE STACK
30. FLARE STACK
31. DIGESTED SLUDGE REWATERING (AREA 4 - SEE DRG 785 FOR ITEM LIST)
32. DIGESTED SLUDGE REWATERING (AREA 5 - SEE DRG 786 FOR ITEM LIST)
33. DIGESTED SLUDGE REWATERING (AREA 6 - SEE DRG 787 FOR ITEM LIST)
34. DIGESTER INFEED PUMPS
35. DIGESTER INFEED PUMPS

**KEY TO LINE TYPES**

- PLANNING APPLICATION AREA
- EXISTING STRUCTURES
- STRUCTURES DEMOLISHED
- PERMITTED DEVELOPMENT
- PROPOSED WORKS - REQUIRING PLANNING PERMISSION



DRAWINGS CAN BE SCALED FOR PLANNING PURPOSES

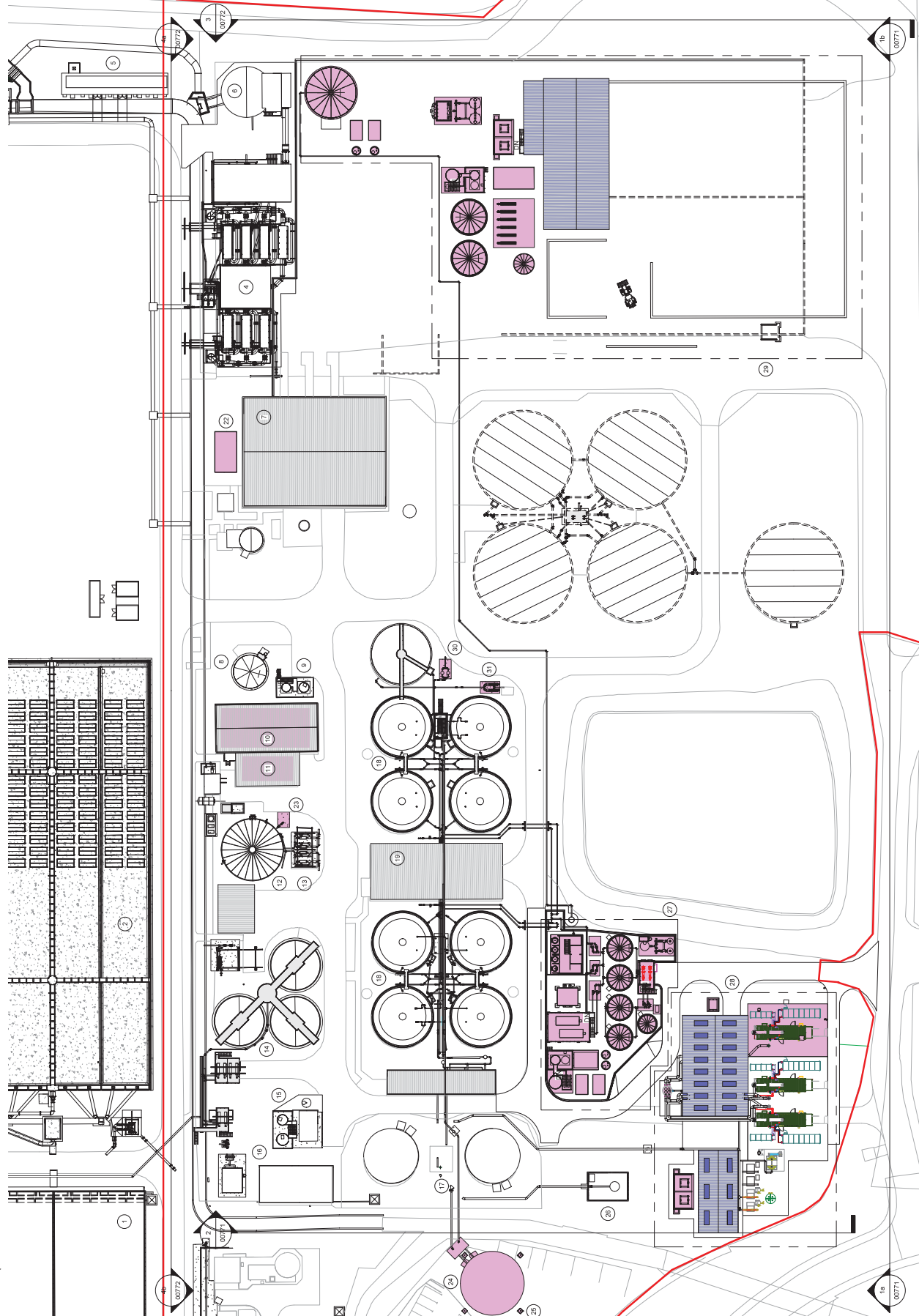
No.	Description	Jr.	CRNI	Date
A	PLANNING APPLICATION	JR.	CRNI	07/07/2012
			Checked	

**Thames Water Utilities**  
**CAPITAL DELIVERY**

Route 1000, London, Reading, RG2 9TP  
 Route 1000, London, Reading, RG2 9TP

Location Code	OS Reference	Security Reference	Drawn By
DEEPSIZZ	U033937	UBR	JR.
Project Group	SAP Process	Sheet Size	Scale
WASTEWATER	A1	A1	As Indicated
Location / town / DEEPHAMS / LONDON			
Contract Name	AG30 DEEPHAMS STW UPGRADE		
Contract No.	AG30 DEEPHAMS STW UPGRADE		
Drawing No.	ENHANCED SLUDGE DIGESTION (THP)		
PROPOSED SITE PLAN			
Rev.	AG30-AMK-000-00 - P - SHT- 00754		
	A		

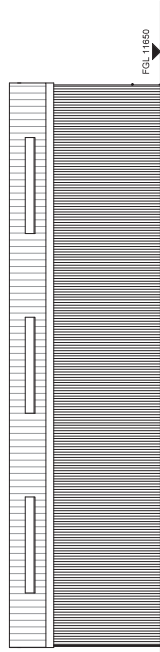
© Thames Water Utilities Ltd 2006



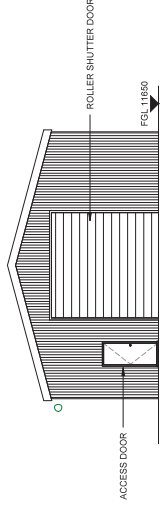




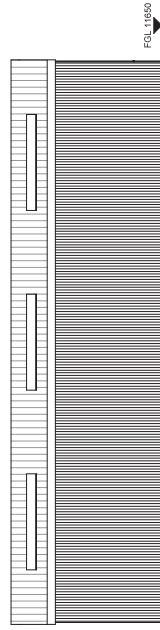
EXTERNAL BUILDING MATERIALS  
 WALLS & ROOF  
 POLYESTER COATED STEEL PROFILED SHEET, COLOUR GREY (MOONSTONE) PAL 1055  
 ROOF  
 CORRUGATED GALVANIZED STEEL SHEET, COLOUR BLUE (RAL 5005)  
 FASCIA, GUTTERS & DOWNPIPES  
 TO MATCH WALLS & ROOF



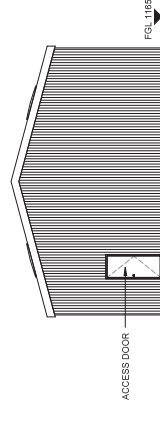
1 NORTH ELEVATION  
 00793 | SCALE: 1:100



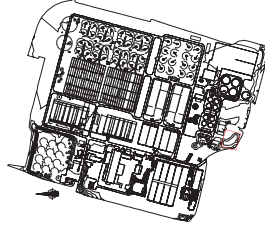
3 EAST ELEVATION  
 00793 | SCALE: 1:100



2 SOUTH ELEVATION  
 00793 | SCALE: 1:100



4 WEST ELEVATION  
 00793 | SCALE: 1:100



SCALE 1:100  
 1 2 3 4 5  
 m

DRAWINGS CAN BE SCALED FOR PLANNING PURPOSES

No.	Description	Rev.	By	Checked	Date
A	PLANNING APPLICATION	01	CSNI	CSNI	07/07/2015



**Thames Water Utilities**  
 CAPITAL DELIVERY

Rose Hill Court  
 Rose Hill Lane, Reading, RG2 0TP

Location Code	OS Reference	Survey Reference	Drawn By
DEEPSIZZ	UQR	UQR	JR
Project Group	SAP Process	Sheet Size	Scale
	AI	A1	As Indicated
Location / Town	Site Name	Contract Name	Drawing Title

A630 DEEPHAMS STW UPGRADE  
 A630 DEEPHAMS STW UPGRADE  
 ENHANCED SLUDGE DIGESTION (THP) AREA 4  
 COMBINED THP & CHP LV & HV MCC BUILDING  
 A630-AMK-020-00 - P - SHF-00764



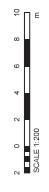
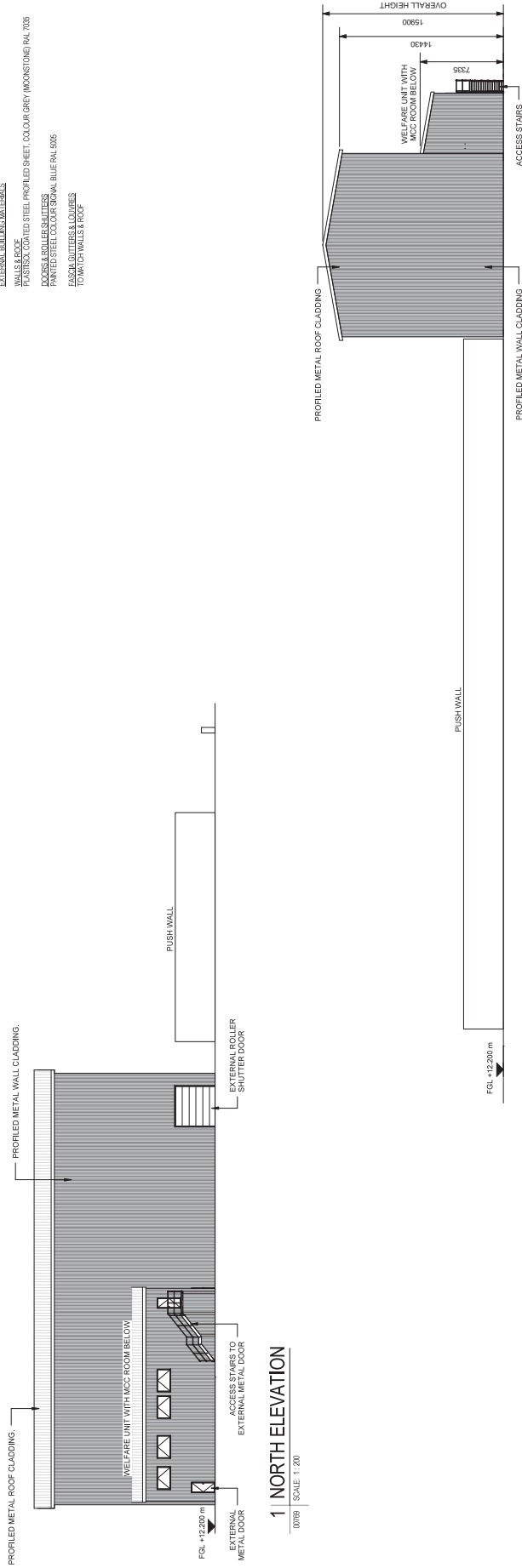
**AMK**  
 Weymouth Business Park  
 Weymouth, Dorset, South West, DT9 8DL  
 Tel: +44 (0) 1302 524468 Fax:  
 +44 (0) 1302 524469

**PLANNING APPLICATION DRAWING  
 NUMBER AMK-THP-019**

ALCOM PROJECT REF:

NOTES:

EXTERNAL BUILDING MATERIALS  
 TO BE USED TO COVER ROOF  
 TO BE GALVANIZED STEEL PROFILED SHEET, COLOUR GREY (ACQUINON) RAJ 7035  
 TO BE GALVANIZED STEEL PROFILED SHEET, COLOUR BLUE RAJ 5076  
 TO BE GALVANIZED STEEL PROFILED SHEET, COLOUR BLUE RAJ 5076  
 TO BE GALVANIZED STEEL PROFILED SHEET, COLOUR BLUE RAJ 5076  
 TO BE GALVANIZED STEEL PROFILED SHEET, COLOUR BLUE RAJ 5076  
 TO BE GALVANIZED STEEL PROFILED SHEET, COLOUR BLUE RAJ 5076



DRAWINGS CAN BE SCALED FOR PLANNING PURPOSES

No.	Description	Rev.	Date	Checked By	Date
A	PLANNING APPLICATION	RW	06/07/2015	CRNJ	06/07/2015

**Thames Water**  
 CAPITAL DELIVERY

Thames Water Utilities  
 Roper Hill Court  
 Roper Hill Lane, Reading, RG2 0TP

Location Code	OS Reference	Survey Reference	Drawn By
DEP532	TQ33897	UBR	JR
Project Group	SAP Process	Sheet Size	Scale
WASTEWATER	A1	A1	As Indicated

Site Name  
 Location: town DEEPIAMMS LONDON

Contract Name  
 A630 DEEPIAMMS STW UPGRADE

Contract No.  
 A630 DEEPIAMMS STW UPGRADE

Drawing Title  
 ENHANCED SLUDGE DIGESTION (THP)  
 AREA 3 - DEWATERING BUILDING & CAKE PAD

Rev. No.  
 A630-AMK-030-00 - P - SHT-00769

© Thames Water Utilities Ltd 2016

**PLANNING APPLICATION DRAWING  
 NUMBER AMK-THP-021**

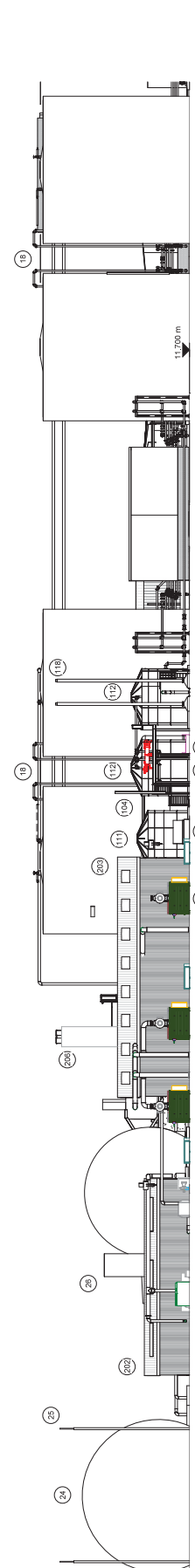
ALCOB THP-021

**NOTES**

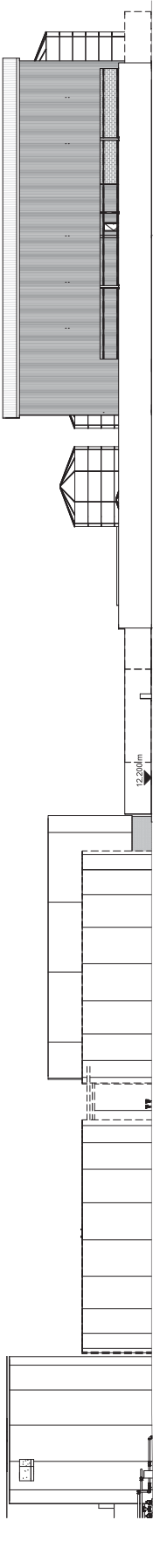
- REF TO PROJECT SPECIFICATIONS**
1. PRE-TREATMENT TANKS
  2. ACTIVATED SLUDGE PLANT (ASP)
  3. CHEMICALS
  4. THERMAL HYDROLYSIS PROCESS (THP)
  5. THERMAL HYDROLYSIS PROCESS (THP) PLANT
  6. DISC FILTER PLANT (DFP)
  7. SOLIDS HANDLING BUILDING
  8. POLYMER STORAGE TANKS
  9. POLYMER STORAGE TANKS
  10. DEWATERING TANKS
  11. DEWATERING TANKS
  12. DEWATERING TANKS
  13. DEWATERING TANKS
  14. DEWATERING TANKS
  15. POLYMER STORAGE TANKS
  16. POLYMER STORAGE TANKS
  17. GAS HOLDING TANKS
  18. PRIMARY DIGESTERS
  19. DEWATERING BUILDING
  20. DEWATERING BUILDING
  21. DEWATERING BUILDING
  22. DEWATERING BUILDING
  23. DEWATERING BUILDING
  24. BIO-GAS STORAGE GAS BAG
  25. BIO-GAS STORAGE GAS BAG
  26. BIO-GAS STORAGE GAS BAG
  27. BIO-GAS STORAGE GAS BAG
  28. BIO-GAS STORAGE GAS BAG
  29. BIO-GAS STORAGE GAS BAG
  30. DEWATERING BUILDING
  31. DEWATERING BUILDING
  32. DEWATERING BUILDING
  33. DEWATERING BUILDING
  34. DEWATERING BUILDING
  35. DEWATERING BUILDING

36. DEWATERING BUILDING
37. DEWATERING BUILDING
38. DEWATERING BUILDING
39. DEWATERING BUILDING
40. DEWATERING BUILDING
41. DEWATERING BUILDING
42. DEWATERING BUILDING
43. DEWATERING BUILDING
44. DEWATERING BUILDING
45. DEWATERING BUILDING
46. DEWATERING BUILDING
47. DEWATERING BUILDING
48. DEWATERING BUILDING
49. DEWATERING BUILDING
50. DEWATERING BUILDING
51. DEWATERING BUILDING
52. DEWATERING BUILDING
53. DEWATERING BUILDING
54. DEWATERING BUILDING
55. DEWATERING BUILDING
56. DEWATERING BUILDING
57. DEWATERING BUILDING
58. DEWATERING BUILDING
59. DEWATERING BUILDING
60. DEWATERING BUILDING
61. DEWATERING BUILDING
62. DEWATERING BUILDING
63. DEWATERING BUILDING
64. DEWATERING BUILDING
65. DEWATERING BUILDING
66. DEWATERING BUILDING
67. DEWATERING BUILDING
68. DEWATERING BUILDING
69. DEWATERING BUILDING
70. DEWATERING BUILDING
71. DEWATERING BUILDING
72. DEWATERING BUILDING
73. DEWATERING BUILDING
74. DEWATERING BUILDING
75. DEWATERING BUILDING
76. DEWATERING BUILDING
77. DEWATERING BUILDING
78. DEWATERING BUILDING
79. DEWATERING BUILDING
80. DEWATERING BUILDING
81. DEWATERING BUILDING
82. DEWATERING BUILDING
83. DEWATERING BUILDING
84. DEWATERING BUILDING
85. DEWATERING BUILDING
86. DEWATERING BUILDING
87. DEWATERING BUILDING
88. DEWATERING BUILDING
89. DEWATERING BUILDING
90. DEWATERING BUILDING
91. DEWATERING BUILDING
92. DEWATERING BUILDING
93. DEWATERING BUILDING
94. DEWATERING BUILDING
95. DEWATERING BUILDING
96. DEWATERING BUILDING
97. DEWATERING BUILDING
98. DEWATERING BUILDING
99. DEWATERING BUILDING
100. DEWATERING BUILDING

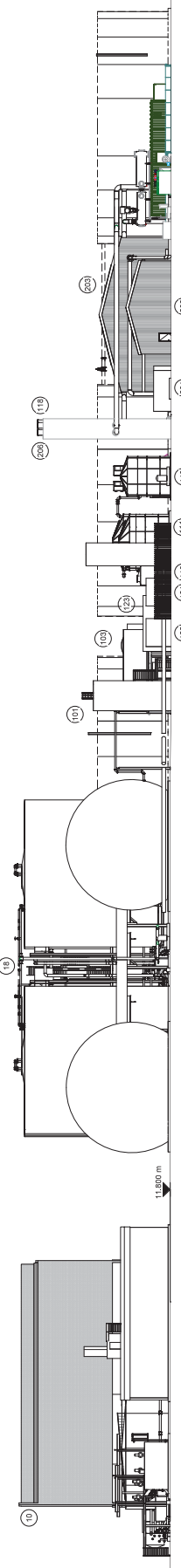
Drawings can be scaled for planning purposes



**1a | ELEVATION 1**  
 00771 | SCALE: 1:250



**1b | ELEVATION 1 (CONTINUED)**  
 00771 | SCALE: 1:250



**2 | ELEVATION 2**  
 00771 | SCALE: 1:250



Location Code	08 Reference	Security Reference	Drawn By
DEEPSIZZ	UQR	UQR	JR
Project Group	SAP Process	Sheet Size	Scale
WASTEWATER	AI	A1	As Indicated
Location	A630 Deephams STW Upgrade		
Contract Name	A630 DEEPHAMS STW UPGRADE		
Contract No.	A630 DEEPHAMS STW UPGRADE		
Drawing Title	ENHANCED SLUDGE DIGESTION (THP)		
Site Sections	SHT SECTIONS SH1		
Revision	A630-AMK-000-00 - P - SHT-00771		
Doc. No.	A		

**PLANNING APPLICATION DRAWING**  
**NUMBER AMK-THP-0022**

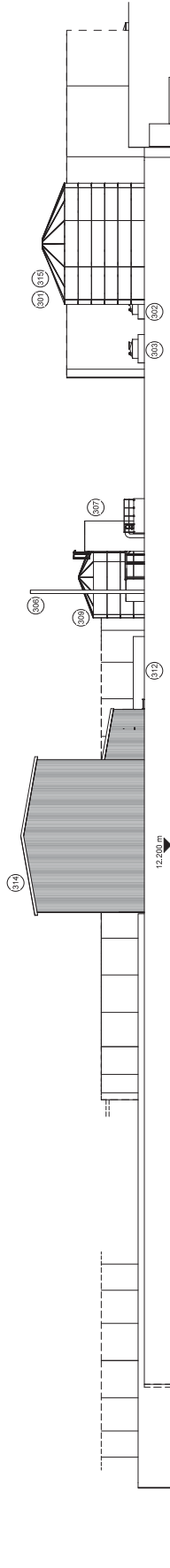
ALCOA PROJECT REF

**NOTES**

- KEY TO PROJECT SUBCATEGORIES**
1. PRIMARY SETTLEMENT TANKS (PST/A)
  2. ACTIVATED SLUDGE PLANT (ASP)
  3. TERTIARY TREATMENT PLANT (TTP)
  4. TERTIARY TREATMENT PLANT (TTP)
  5. TTP MCC/MSK/STORAGE STATION
  6. TTP MCC/MSK/STORAGE STATION
  7. TTP MCC/MSK/STORAGE STATION
  8. SAS BUFFER TANK
  9. SAS BUFFER TANK
  10. AQUARIUM BUILDING
  11. NEW ACTIVATED SLUDGE TRANSFER PUMPS (IN AQUARIUM BUILDING)
  12. DEWATERING PUMPS
  13. DEWATERING PUMPS
  14. SLUDGE BUFFER TANKS
  15. POLYMER STORAGE
  16. ODOUR CONTROL
  17. GAS HOLDERS
  18. GAS HOLDERS
  19. WASTEWATER TREATMENT
  20. DEMONSTRATED
  21. WASHWATER MSK
  22. WASHWATER MSK
  23. PRIMARY SLUDGE TRANSFER PUMPS TO TTP
  24. HIGH SOLIDS DEWATERING POLYMER MAKE-UP & STORAGE TANKS
  25. BIG BAG STORAGE GAS BAG FARMWAY CASE
  26. FLARE STACK
  - 27.
  - 28.
  - 29.
  - 30.
  - 31.
  - 32.
  - 33.
  - 34.
  - 35.

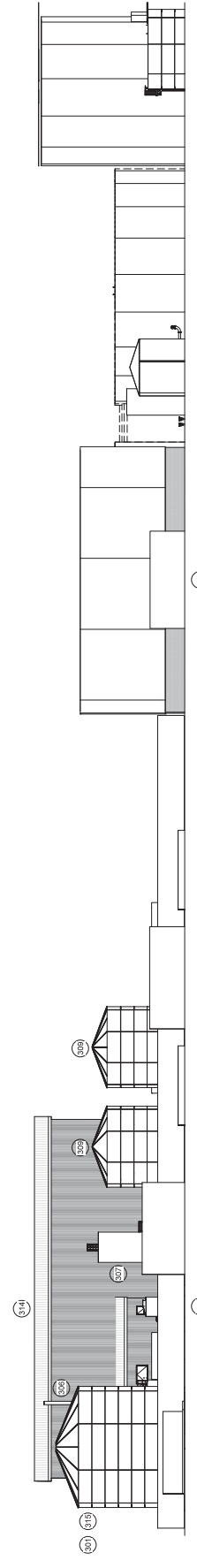
**3 ELEVATION 3**

0072 | SCALE: 1:200



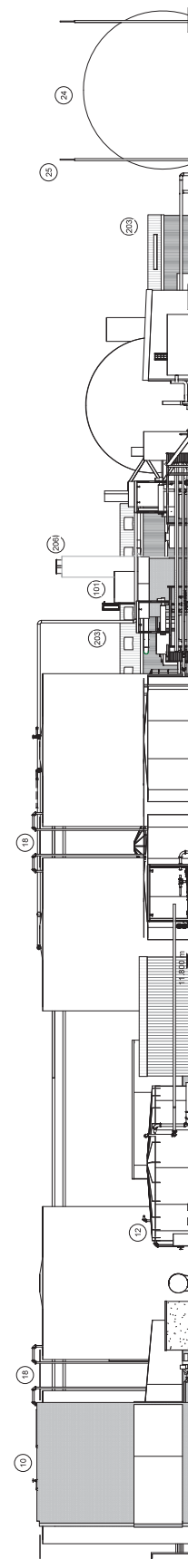
**4a ELEVATION 4**

0072 | SCALE: 1:200



**4b ELEVATION 4 (CONTINUED)**

0072 | SCALE: 1:200



DRAWINGS CAN BE SCALED FOR PLANNING PURPOSES

Revisions	Description	Jr.	CR/Nr	Date
A	PLANNING APPLICATION	JR.	CR/Nr	07/07/2012



**Thames Water Utilities**  
 CAPITAL DELIVERY  
 River Skills Centre, Reading, RG2 0TP

Location Code	OS Reference	Survey Reference	Drawn By
DEEPSIZZ	VQ33897	UBR	JR.
Project Group	SAP Process	Sheet Size	Scale
WASTEWATER	AI	A1	As Indicated
Location	AG30 Deephams STW Upgrade		
Contract Name	AG30 DEEPHAMS STW UPGRADE		
Drawing Title	AG30 DEEPHAMS STW UPGRADE		
Site Sections	ENHANCED SLUDGE DIGESTION (THP)		
Revision	AG30-AMK-000-00 - P - SHT-00772		
Scale	A		