London Employment Sites Database

A Proposal to GLA

January 2016

Contents

1 Introduction

1.1 Study Brief

CAG Consultants are very pleased to respond to the invitation to tender issued by the GLA to update the London Employment Sites Database (LESD).

CAG offer a team with unrivalled experience and knowledge of the London Employment Sites Database. We are able to apply this experience and knowledge to deliver a high quality product at excellent value for money. We bring three unique strengths to this project:

- We understand the issues and potential risks with regard to the data sources and compilation of the data.
- We understand how the database is going to be used in practical terms and hence appreciate the sensitivities with regard to decisions that need to be made at different stages of constructing the database.
- We are able to bring current knowledge of working with this dataset through a project we are working on for TfL and hence are able to bring a cost saving to this commission.

1.2 Past Experience

Track Record of producing the LESD

Our team brings experience of having successfully produced the LESD on repeated occasions in the past. Dave Lawrence who will lead this study has been responsible for the versions of the database produced in 2004, 2006, 2009 and 2012. Jake Sales who will be the GIS consultant for this study was responsible for introducing GIS innovations in past iterations of the database.

Our team also bring experience with applied use of the LESD through projects such as the LTS employment projections, which we have prepared for TfL on repeated occasions, and the London Office Policy Review, prepared for the GLA.

We have a robust and tested method for producing this database which we elaborate on in the next Chapter. We believe that the LESD is an important planning policy tool and are keen to ensure that we continue to evolve and improve our methods, the database and the validation of the database. Our experience of producing and working with the database means we understand the end uses of the LESD and we understand that there are opportunities to further improve the database and extract more value from its use.

1.3 Our understanding of the key issues

The LESD – a robust and comprehensive database

The LESD brings together a vast body of information from numerous sources into one comprehensive database in a standardised and user friendly format. Some of the major information sources listed in the brief include the London Development Database, the National Land Use Survey, Local Plans for each Borough and industry press such as Property Week. Our team has experience of working with each of these datasets.

We know that there are significant differences in the type of information and level of detail provided by each data source and for each site. The LESD database will extrapolate all the essential information from these data sources and standardise the presentation of the information into the 36 fields identified in the brief. The approach and method we have developed to produce the database will ensure that no data is lost or compromised in the standardisation process and that there is a clear audit trail from the "raw data" stage to the finalised LESD. Each site from each data source is given an ID number that can be checked against the original source data and any amendments made are clearly referenced.

We understand the end uses

The database is used to inform the LTS employment projections. We understand the sensitivities around assumptions about (for example) employment densities and plot ratios and how these may impact on these forecasts. These forecasts are a major tool in informing the Mayor's Transport Strategy and London Plan so it important to be fully aware of these implications.

The LESD is one leg of the Triangulation methodology that creates the GLA's borough employment forecasts. We understand and can replicate this method and are thus able to carry out validation checks on the sensitivity of the LESD. The triangulated employment forecasts feed into the London Plan, the London Office Policy Review and TfL's Transport Planning models. As such it provides a fundamental planning policy tool for London.

The LESD plays a further role as an input into TfL's LTS transport model. It is used for fine grained distribution of employment projections for LTS transport zone models and has also been applied to other model systems such as RailPlan and LATS and as an input to the LonLUTI model.

The database is also used to inform the London Office Policy Review. It acts both as an input to the forecasts through the Triangulation methodology and also as a tool for analysing the balance between supply and demand at the borough level. It thus plays an important role in strategic planning policy for London.

We are also keen to explore with the GLA potential further applications of the LESD. In particular with the growing pressure for residential development, London needs to ensure there is sufficient capacity for employment development to meet the economic needs of the capital. The LESD can play a crucial role in advising on optimal planning allocations.

The LESD as a working tool

We have worked with the LESD as an analysis tool and regularly use the database for research purposes. This experience of working with the database at the end-user stage gives us real insights into the strengths and weaknesses of the database and the things that can be done better. It is for this reason that we believe that undertaking this consultancy service is not a standardised process – we always aim to add value and to improve the database from the end-user perspective.

In addition to the current uses of the database there are potentially many other applications of the database. For example:

- It gives a rapid overview of proposed development patterns across London.
- It can be cross-referenced with other data, such as the London Housing Capacity Database to help determine competing land uses.
- The database can be linked to Google Earth.
- Past versions of the database can be compared to track how change in development over time relates to proposals and applications. This would help to provide a better understanding of the planning and development process in London and could be used to improve the spatial forecasting model.

A static database in a dynamic economy

The LESD is a static database. It provides a snapshot of employment sites in London at a particular stage in time. However London's economy is very dynamic and constantly evolving and developing. Equally the sites in the planning pipeline are continually evolving and progressing. This is why regular updates of the LESD are very necessary.

When a large new development proposal is first put forward it has the potential to significantly alter the spatial balance of pipeline development activity in London. This is where sensitive application of the database is important to ensure appropriate decisions are made about future infrastructure provision.

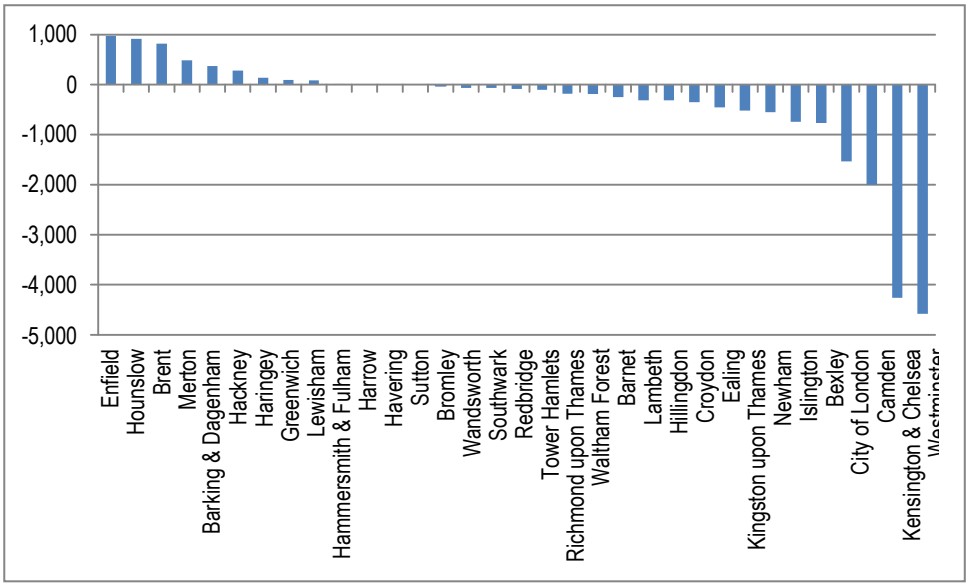
The Impact of Permitted Development Rights

The LESD seeks to identify new potential employment capacity coming through the planning and development pipeline. Historically there have been some negative impacts identified for industrial land. For office development we have sought to identify net change where redevelopment is involved, but the net change from such developments has (nearly) always been positive.

But the last few years has seen increasing pressure for residential development in London, even in areas where the office market is strong. This pressure has been heightened with the introduction of Permitted Development Rights (PDR). The effect is such that recent office completions have in total seen in net negative impact on employment capacity. The impact has been greatest in Central London boroughs as shown in Figure 1.1.

As well as indicating potential shortfall's in future land for employment, negative numbers add further complexities to the application of the LESD to models such as the Triangulated forecasts and the LTS employment projections.

Figure 1.1 The Impact of Permitted Development Rights on Jobs Capacity in Recent Completions



Source: LDD

1.4 Bringing Knowledge to the Project

We are currently undertaking work for TfL which enables us to bring knowledge and data to this project that create efficiency savings we can pass on to the client.

Helping to deliver to the a tight timetable

One advantage of our team's past experience in producing the LESD, and more recent work we have undertaken updating the database, is that this work provides us with the ability to pick up this commission and move quickly to meet the tight deadlines presented in the brief.

The main issue with these tight deadlines is the time required for the Borough consultations. It will take some time to set up and to meet with the respective Borough representatives. As we have recently updated the LESD we can begin consultations at an early stage based on the updated database with new LDD data. In other words we can undertake various stages of the work simultaneously and in this way meet the tight timetables of the study without compromising the quality of the database.

Helping to Reduce Cost

A further impact of the efficiency savings is in terms of the project cost. We would estimate that the savings due to stages of work already undertaken enables us to lower the overall project cost by around **REDACTED**, roughly **REDACTED** of the total budget.

In the following method chapter we set out where these savings will be made.

2 Method

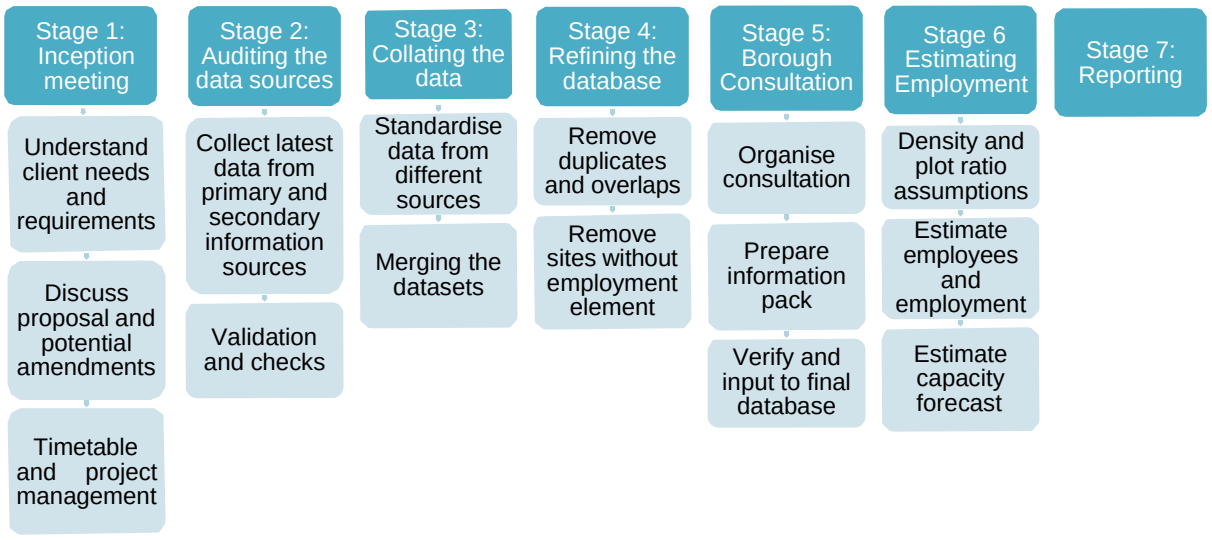
2.1 Approach

This chapter sets out the method used to produce the London Employment Sites Database. The method we have developed and evolved over successive iterations ensures that we have a clear and transparent audit trail; that the data is verified and cross checked against information from numerous sources and that the final database is robust. In other words, this method will meet the GLA's quality assurance requirements.

Whilst we have a rigorous and tested method we also look to add innovations for each iteration of the database whether this be in sources used, scope of analysis, or ways of improving the accuracy of the data.

The method and stages of work are summarised in Figure 2.1 below. Below the Figure we expand on the task to be undertaken at each stage.

Figure 2.1 Method and approach



In December 2015 CAG produced an interim update of the LESD as part of the work we have been undertaking for TfL on updating the LTS employment projections (one of the principal uses of the LESD). As a result we have already completed substantial parts of Stages 2 – 4. But we will supplement this with additional and more up to date information using the same method presented below.

Stage 1: Inception meeting

The inception meeting will provide us with an opportunity to discuss the commission with the client team to deepen our understanding of the client team's needs and requirements. We will also discuss the end uses for the database and timeframes needed to deliver the commission.

A key part of the study is the consultation with London Boroughs. This is a resource intensive part of the study and we will hope to discuss contacts, timings and the best approach to ensure we can quickly set up and meet with the Boroughs.

An important element once the draft database has been compiled is the estimation of employment and employee jobs. We would also at this early stage want to review the existing working assumptions and agree on the assumptions or alternatively discuss any further research required.

Finally at the inception meeting will discuss the access to data and the method proposed in this proposal. In addition we will agree dates and venues for subsequent meetings and any other housekeeping arrangements.

Stage 2: Auditing the data sources

The brief sets out the sources of data to be used in compilation of the database. The last two editions of the LESD (2009 and 2012) were based on three primary information sources and we propose to continue to use these primary data sources:

- The London Development Database from the GLA. As set out above we have just completed an update using the latest LDD data. We propose to review the latest data from the GLA, validate the information and supplement the database with any new/amended site data

- The National Land Use Database from the HCA. The LESD (2009) was based on the London Brownfield Sites Review produced by the LDA in 2009 but this database is no longer available. The latest published NLUD data is for 2012 (published October 2014). The published data comes with a number of caveats, but nevertheless provides a source for identifying potential employment developments. We will confirm the most up-to-date NLUD data and supplement the database with any new sites to ensure no sites are missed.

- Borough Local Plans (previously Unitary Development Plans and Core Strategies). The GLA are able to supply digitised versions of the latest Local Plans.

Combining the information from these primary information sources produces a comprehensive database. In addition, secondary data sources are used to supplement and check the information provided by these primary data sources. We propose to review and include additional data from:

- The EGI database – With the GLA being able to provide access to this data, this will provide a useful cross-check on the LDD data to ensure no significant developments are omitted.

- Any press publications – such as Property Week and CoStar, which will provide up to date information on major new proposals and changes to existing schemes

- The LUTE Database – held by TfL which has development data for parts of east London

Our past experience indicates that the majority of sites identified through the secondary data sources are duplicates of sites from the primary data sources. However they are important for data verification and quality assurance processes.

Opportunity Areas and Areas of Intensification

It is important that the LESD incorporates the latest policy planning ambitions for the Opportunity Areas and Areas of Intensification. These represent the major brownfield opportunities in London and identify areas that could be subject to substantial additional development activity. The planning targets for the OAs and AoI's are under continual review as new opportunities are assessed. For example, at present

Opportunity Areas Frameworks for both Old Oak Common and Old Kent Road are currently under development with work being undertaken on the proposed employment content of these locations.

It is therefore important that the right level of infrastructure is planned in order to enable these sites to deliver to their full potential

Meeting with the GLA to ensure we have captured these latest planning ambitions is one of the essential tasks for compiling the LESD but is one where we are again able to offer efficiencies. This is an exercise we are currently engaged in for the work we are doing for TfL and represents another saving we are able to bring to this project.

Stage 3: Compiling the data

In stage 3 we will extract all possible data from the data sources including any available GIS information and upload this into MS Excel and into the latest GIS software[1]. Our aim is to gather as much information as possible from each data source regarding the identity of a site, location, existing use, proposed use and potential employment capacity. Secondly we aim to standardise the presentation of this information.

To ensure that we have a clear and transparent process and to comply with quality assurance requirements we will undertake a phased compilation process:

i) Collect the data from each data source and upload the data into a spreadsheet;

ii) Using value lookup functions to arrange the data into the 36 fields suggested in the brief. (Plus any additional fields to be agreed). If the information does not exist from a particular data source, the cells will not be populated at this stage. We also suggest the following additional fields: PTAL ratings; Opportunity Area and Area of Intensification; CAZ, Inner, Outer.

iii) Compile the data from each source into one spreadsheet, giving each site a unique identity number.

Owing to the potentially large number of sites that can contribute to the database, we will use a strict system of monitoring what goes in, what stays in and what is left out. Each site is given a unique ID number when it is identified from the various sources. This ID number system will remain the same regardless of how many sites are removed due to reasons such as overlaps, duplicates, completed sites etc. Accompanying the ID number will be a source name and source reference. For example if we were to add an NLUD site from 2009 which has a reference of 100123456 then its entry into the database would read: ID: 1; Source: NLUD 2009; Source Ref: 100123456.

By the end of stage 3 we will have the raw London Employment Sites Database.

Stage 4: Refining the data

Once the raw database of potential sites has been compiled, a refinement process will be undertaken.

The objective is to identify and remove non-employment and duplicate sites, deal with overlapping sites and expired sites. Any sites that are removed or altered in any way will be placed into a separate second database. This is to ensure that there will always remain a complete set of sites that can be referred back to. If a site has a duplicate in the separate second database then this will be indicated in the main

[1] The GIS packages used will be able to output the data in either a MapInfo TAB file or an ESRI Shape file.

database. This keeps a thorough audit trail of all data for quality assurance purposes. The large part of this process will be undertaken using GIS.

Refining the raw database

Task A: non employment sites

All sites that do not contain an employment element are excluded from the database as per the brief. Where there is a mixed residential scheme with an element of employment, these sites are retained in the main database. At this stage all employment uses are included.

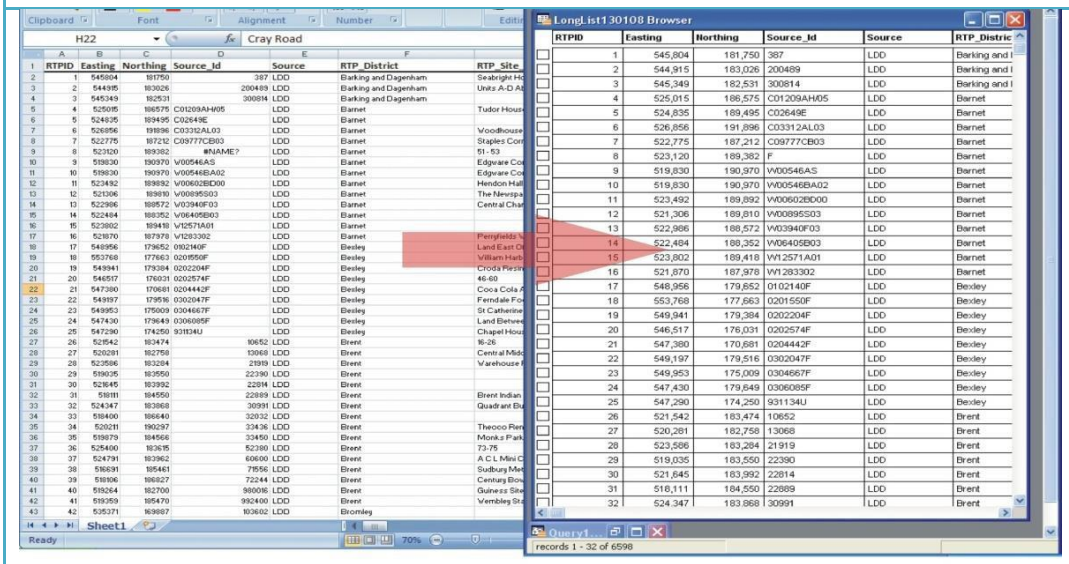
Task B: small sites

In the previous LESD sites under 1,000sqm or 0.25 ha are excluded from the database. Our review of B1 employment space losses for the London Office Policy Review indicates that in London there are a large number of very small sites that are lost to residential and cumulatively these losses are relatively large. For this reason we propose to include small sites in this LESD where information is available. However when geocoding these sites and when consulting with Boroughs we will not focus on these.

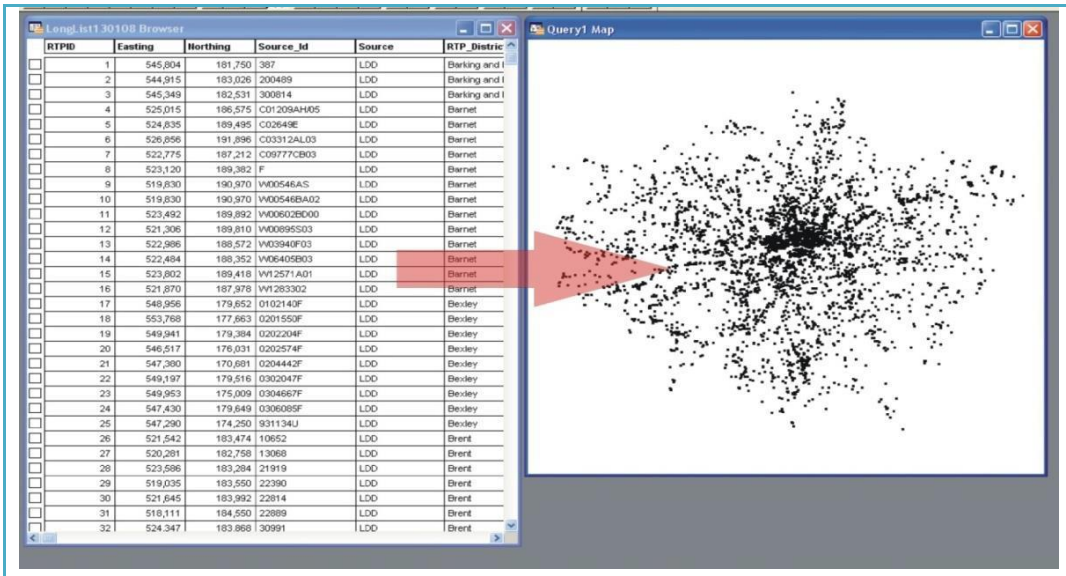
The database aims to capture net change in floorspace. However in practice this information is not always available. For vacant or derelict sites it is not an issue as gross and net gains will be identical. We will attempt where possible, through borough consultations, to identify net change. But where we are not able to do this we will record whether the estimate is net, gross or unknown. This enables the data to be subsequently interrogated further, or a set of rules established as to how the data should be treated in employment capacity estimates.

Task C: Transfer the database to GIS

The database will then be transferred to GIS for further refinement.



Each site in the raw database is geocoded using either postcode data or Easting and Northing references. All sites that are carried forward from the LESD 2012 into the new database will have their digitised boundaries included.



Every site that does not have a polygon will have an arbitrary circular polygon created based on the site size specified in the original data – this allows us to better detect overlapping sites and duplicates.

Task D: Identifying and removing duplicate sites

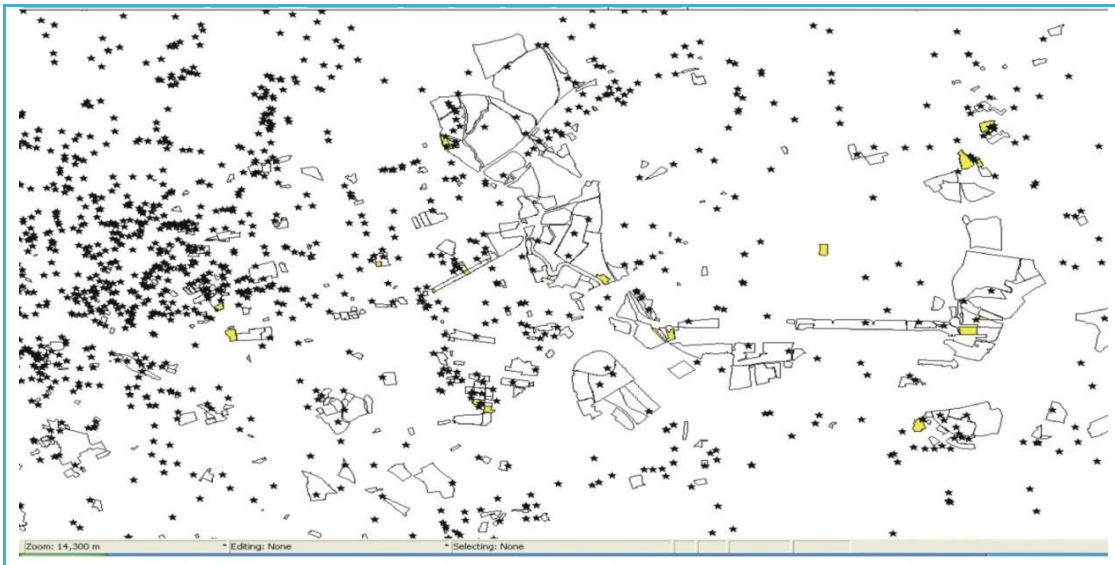
Using GIS, the polygons are layered to identify overlaps between two or more sites. These 'overlap polygons' are given a unique ID and a size is calculated for each one.

Using the 'overlap polygons' layer, a query is performed within the GIS to determine which sites share the same overlap and by how much.

An excel spreadsheet report is produced which shows each instance of a shared overlap by row. The higher the % Overlap figure, the higher the chance of the site being a duplicated site – or having a significant overlap.

For sites that have no actual site boundary, just an arbitrary circle, there is an element of probability involved when determining overlaps. Only sites that score extremely highly (>95%) can be safely assumed to be a duplicate. Anything lower needs a little further investigation.

Any sites below a 95% overlap need a further check looking at their address or description. If this matches then one of the sites can be considered a duplicate. Thanks to the GIS analysis, this is not a tedious process as all sites that are very close together spatially, are also next to each other on the spreadsheet.



- Use GIS to identify overlaps and duplicate sites
- Remove duplicate sites (transferring useful data to the site we keep)

A new column is produced in the spreadsheet that gives the CAG ID number of the site for which that site is a duplicate. This is so that after any useful text/numeric data in the duplicate is transferred to the main site; the duplicate site can be removed to a 'deleted sites database' and still maintain an auditable relationship with the main site.

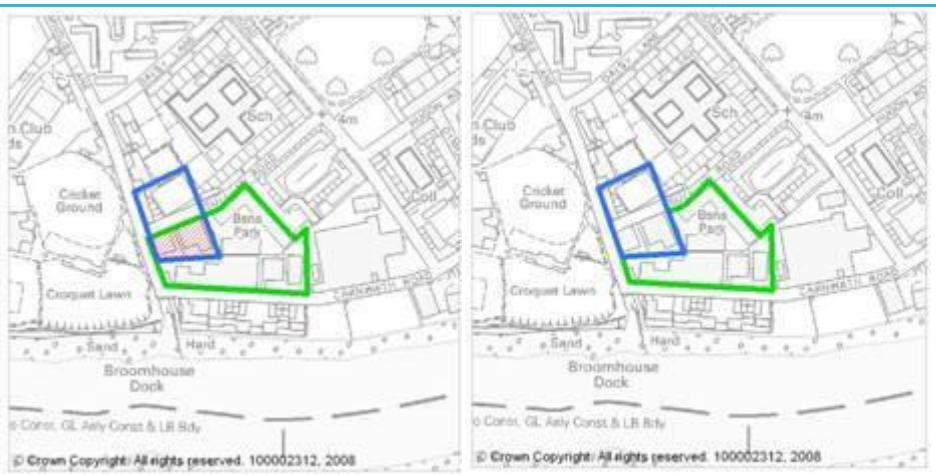
A manual verification process will be undertaken prior to producing the first cut of the database to be presented to the Boroughs.

It is important that when a duplication is removed, all the information for that site is supplemented and any missing values populated.

In some case there will be sites that do not overlap geographically but that are located very near to other sites. We will create buffer zones around the sites and where we find sites very near we will do a manual check of the sites.

Task E: Identifying overlapping sites

Some sites may not be duplicates but are overlapping. For example a site identified by LDD may overlap a site identified by NLUD as illustrated below.



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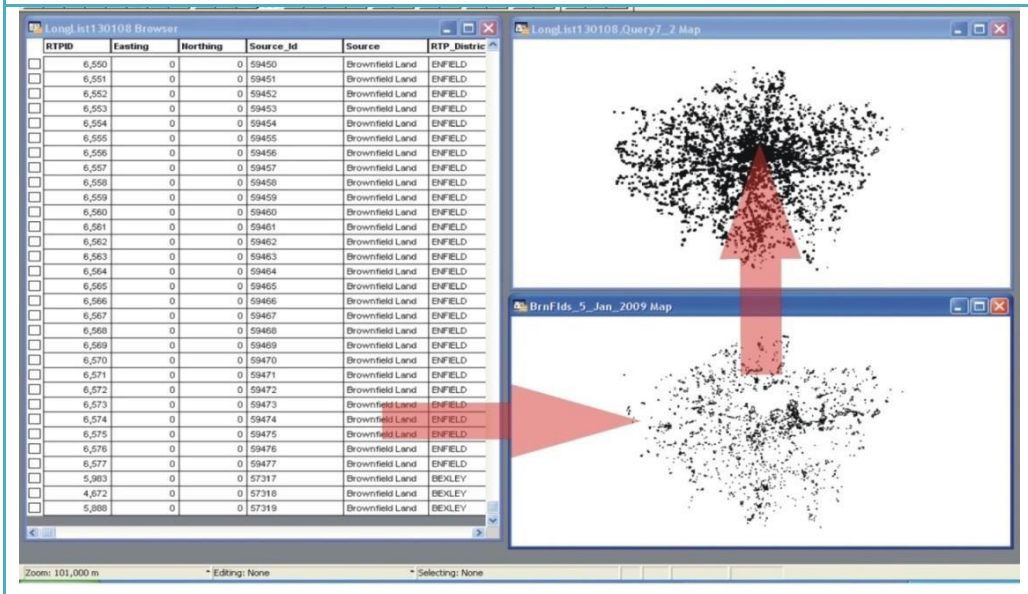
Overlaps can be corrected using GIS based SQL Queries to identify and correct sites with overlaps. Every instance of overlap can be identified using GIS and the appropriate section ‘cut out’ of one of the sites (usually the one with the older source or the less reliable boundary). Where this is type of refinement is required we will retain their original ID but a new field will be added that explains the modifications.



- Use SQL to match GIS data from the Brownfield Land Database to matching fields in the main database

At the end of stage 4 we will have the first draft of the LESD 2016. This data will be carried forward to the next stage where further validation and checks will be undertaken in consultation with the London Boroughs.

Stage 5: Borough Consultations

A key part of updating the LESD is the consultation with London Boroughs. This provides an opportunity to review the sites data and, importantly, to quality check the information we have gathered and understand the local realities regarding probabilities of sites coming forward; expected change of uses; new employment sites coming forward and the strategic planning context. In the past these consultation have proved very useful providing a “real life” angle to the database.

In December 2015 we completed major components of Stages 2 to 4 of the LESD as part of our work to update the LTS employment projections for TfL. We propose to update and supplement the database with new information and undertake further verification processes. This updated database means that we can begin the Borough consultations at an early stage of this project. This is very important given the short timescale (and timing) within which to undertake the Borough consultations.

We propose to base our Borough consultations on the previous Borough Consultation Pro-forma used for the past two LESD updates. (A copy of this pro-forma is presented in Appendix 1.) The consultations will be carried out by highly experienced and qualified researchers all of whom are full time Partners of CAG. This is to ensure this exercise is carried out with the highest level of professionalism and integrity.

Framework for Borough Consultations
Task A: Borough Contact List
At the inception meeting we will discuss and confirm the Borough contact list with the client group.
Task B: Setting up a meeting
A letter of introduction will be drafted, reviewed and once confirmed with client group will be sent to all Borough contacts
CAG will set up a meeting with each Borough. A CAG partner will be assigned to each Borough as the main point of contact.
Task C: Preparing a Borough information pack
For each meeting we will prepare an information pack including: • A large detailed Borough map with all the identified sites plotted onto the map; • A list of the identified sites and the detailed information of the sites capacity, location and timeframes for development; • Individual site maps to confirm the site boundaries. We have developed a site map printing program in GIS for the LESD sites so we can quickly produce a map for every site in a particular borough**.**
Task D: Consultation
The objective of the Borough consultations are to: • Review and amend the site information including the location, scale, use class and timing data; • Gather information for new sites; • Produce polygons for sites without GIS boundaries.

A revised version of the database post-consultation will be sent to the Borough for final confirmation and validation.

Once the Borough consultations are complete the LESD data will be refined by Borough and finally joined together into one database. A final process of verification will be undertaken for quality assurance purposes. By the end of stage 5 we will have the site data for the final LESD 2016.

Stage 6: Estimating employment

As per the brief we need to estimate the employment capacity of each site. Where available from a specific development proposal we will use the estimate provided, subject to test for plausibility against benchmark data.

In most cases the estimate will be derived from floorspace data by application of employment density ratios. We will agree the assumptions to be used with the client based on the latest research data available on employment density ratios. If required we will undertake further work to review these estimates (see below). Employment density ratios vary by use type. They can also vary by geography and we will apply the density ratios by a lookup table within the database in order that the assumptions can be varied for sensitivity testing.

Where only a site area is available we will apply assumptions based on plot ratios. This is likely to apply for some of the longer term development proposals such as Local Plan site allocations. Assumptions also need to be applied with regard to the mix of uses on site. We will try to agree this mix with the respective Local Authorities during the borough consultations, but if they are not able to provide us with this information we will apply a set of defaults assumptions based on past research.

The LESD capacity estimates can be quite sensitive to the assumptions made at this stage. For example on a large brownfield site if it is assumed that, say 25% of the site would be B1 use, then the plot ratios and density assumptions would generate a high level of jobs. But, if in reality 90% of the site was to be developed for housing, then the jobs capacity would fall substantially. Any assumptions with regard to the mix of uses on such sites will be subject to some a reality check to ensure the estimates do not distort the database outcomes

Again any assumptions used will be provided in the form of a lookup table in order that alternatives can be readily applied.

Stage 7: Reporting and final validation

The study output will be an electronic copy of the database in Excel and an accompanying technical report describing its compilation and setting out results based on the findings.

The report and database will include summary tables for London, Boroughs, Central Activities Zone (CAZ), Northern Isle of Dogs, rest of inner London, outer London, Opportunity and Intensification Areas and town centres based on GIS boundaries for these areas supplied by the GLA. As noted previously assumptions with regard to employment density and plot ratios will be provided in the form of a lookup table to enable the client to carry out sensitivity tests or update as new research material on these measures becomes available.

The technical report will set out clearly the method and sources used for compiling the database and will note any caveats that need to be applied to the data or its interpretation. We will also provide a brief commentary on the results and compare the outputs of the LESD 2016 with that of previous versions.

2.2 Additional Data Fields

The brief ask for suggestions as to any additional data fields that could be added to the database. We set out below some suggested additions.

Geo-coded statistical data

Additional fields could be added on a range of geo-coded statistical data sets such as Census data. By adding data from the local vicinity of the site this could be a way of seeing trends e.g. how employment has changed in the vicinity of the site (e.g. within 250m).

The above could also lead to hotspot-type maps that show, for example, the relationship between growth in key sectors and proposed development activity.

Policy Area Boundaries

We noted earlier the possible addition of fields such as PTAL ratings; Opportunity Area and Area of Intensification; CAZ, Inner, Outer. These fields were incorporated in the last LESD. Other policy areas can also be added such as town centres, SIL, and areas under Article 4 Directions. We would need to be supplied with the GIS boundaries for these areas.

Infrastructure Proposals

Additional fields could be added to identify development in the catchment of proposed new infrastructure such as Crossrail 2. This data would be a useful source in developing the supporting business case for such projects and save duplication of work.

Housing Data

Whilst the LESD at present collects information on the number of housing units in mixed use developments, where this is available, it is not a comprehensive database of residential proposals. The LESD could be combined – or cross-referenced - with the SHLAA database to enable a better understanding of actual capacity in the face of competing land uses.

Qualitative Assessment

At present there is an effective weighting on the likelihood of a development proposal coming forward due to its planning status. For example, a development under construction will use up capacity before an outstanding consent, which in turn will use up capacity before a Local Plan allocation. But there is no probability weighting between the likelihood of developments occurring. Thus for example a large office development proposal in the City is accorded equal weighting to a large office development proposal in outer London.

Historically this approach has not been taken on the grounds that the introduction of professional judgement could be seen as introducing some subjective bias which might be hard to defend at inquiries. It is also the case that the Triangulation exercise with greater emphasis on the Trend projections to a large extent mitigates the need for this step.

2.3 Employment Capacity Projections

One of the principal uses of the LESD is to produce the Capacity leg of the GLA's Triangulated employment projections.

Historically the employment capacity identified by the LESD has always exceeded projected employment growth from the GLA Economics forecasts. It is not inevitable that this will always be the case and there are two factors that may lead to projected demand exceeding identified supply in which case alternative mechanisms for allocating the capacity forecast may need to be considered.

The first of these factors is that the GLA Economics forecast have been revised up following the recent rapid growth in employment in London. The second factor is the increasing competition for employment land from residential development, especially in the light of policy on Permitted Development Rights (PDR).

Whilst the brief does not identify the Capacity projection as a required output for this study, we will undertake to provide this as an additional output at no additional cost.

2.4 Digitised Site Boundaries

Digitising the Data

Appendix A2 of the ITT requests a price for an optional additional service of providing a digitised site boundary file for each employment site in addition to providing a standard grid reference.

We expect to have many of the sites GIS boundaries; however there will inevitably be sites that have no GIS boundary. To solve this issue our GIS consultant has already developed a GIS-based computer program. The program will take a list of grid coordinates and site areas and produce paper OS maps[2] centred on the grid coordinate and scaled to fit the site in with a circle showing the approximate location and size of the site. These maps will be presented to the Boroughs during the consultation stage and planning officers can draw the correct site boundary onto the map and return it for digitising using detailed OS mapping as a guide.

2.5 Additional Tasks

We have set out above a method for producing the core LESD outputs as specified in the brief. Below we set out two other additional tasks that could be incorporated into this update if required although we have not costed for these in our proposal at this stage

Review of Density Ratios

The principal use of the LESD at present is in the estimation of future employment capacity. This in turn is used to inform the Triangulated employment forecasts and also the employment forecasts that inform TfL's LTS model. Employment capacity estimates derived from development proposals are very sensitive to assumptions made about employment density ratios.

The 2012 LESD used office employment densities of:

- CAZ 12.4 sq m per worker
- Inner London 13.5 sq m per worker

[2] GIS compatible digital OS mapping will need to be supplied for the whole of Greater London (1:10000, 1:25000 and 1:50000 scale raster data and – is possible – the OS MasterMap data.

- Outer London 15.2 sq m per worker

The London Office Floorspace Projections 2013[3] recommended the adoption of a density ratio of 11.3 sq m (Gross Internal Area) which would have the effect of increasing the jobs capacity from the identified office supply. We would anticipate using this latter ratio as our starting point in the absence of further research.

Consultations with commercial agents

Consultations with commercial agents could provide a further source of data for potential sites, though issues of commercial confidence may arise. Agents would be consulted if a qualitative site assessment were required. We have not costed for any large scale commercial agent involvement but would be happy to elaborate if this was required.

2.6 2017 LESD Update

We have set out above the method to produce the 2016 LESD. After completion of the 2016 LESD we will sit down with the client to review any changes of improvements that should be introduced in order to complete the 2017 update.

If there are changes to be made we will incorporate these into a revised methodology which we will present for agreement prior to conducting the 2017 update.

If there are no changes then our proposal to complete the 2017 update follows the same method as that for 2016 described above. Whilst it would be possible to maintain the database on a continual basis throughout the year we do not think this would be cost efficient and would use more resources than the annual updating process. This is due to the quality assurance mechanisms that would need to be built in.

[3] London Office Floorspace Projections 2013 - PBA

3 Work Programme

We set out below the proposed work programme for both the 2016 LESD (Figure 3.1) and the 2017 LESD (Figure 3.2). Both have been set to meet the timetable as set out in the brief, but in our experience the 2016 timetable will prove a very challenging one to meet.

3.1 2016 Work Programme

Due to the stages of work we have already completed we are able to make a very rapid start and have a draft database for consultation within two weeks. Securing co-operation from all 33 boroughs to meet within the timescale is the most challenging aspect.

Although the timetable is very tight, we believe it is achievable through the approach we have adopted.

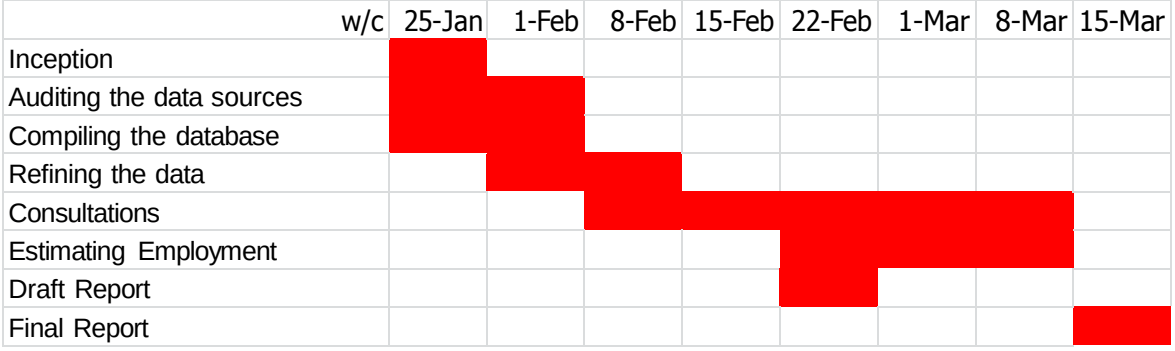
From past experience we know that it is very difficult to achieve all the borough consultations within such a short period. We have designed our method to maximise the chances of achieving this. In particular:

- We will send out a draft database to each borough within two weeks of the start date to prepare for the consultations.
- We will set a timetable for the borough response and encourage their participation through identifying the benefits to them of providing good material.
- We have a team of six people available to undertake consultations to ensure we can cover all available dates. Three team members dedicated to the consultations and three other who are able to substitute or provide support in this process where required.

In addition through our previous work we have a good list of borough contacts although we are aware that personnel change on a regular basis and identifying the appropriate contacts can often add to delays.

We will meet the timetable as set out below but if there is scope we would recommend additional time for the borough consultations to ensure we get the fullest participation from all the boroughs.

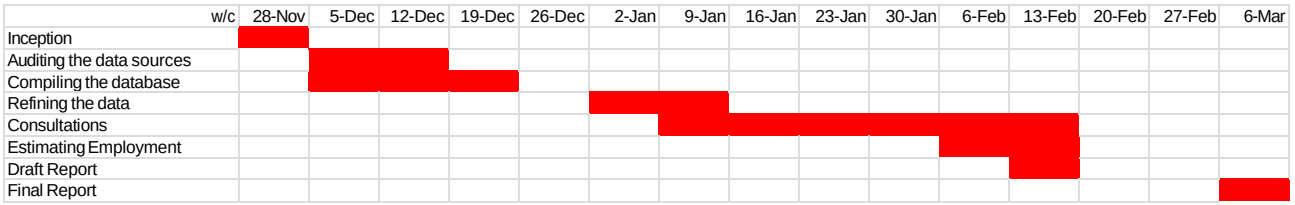
Figure 3.1 2016 Work Programme



3.2 2017 Work Programme

The 2017 Work Programme will follow the same steps. We will start earlier to allow more time to complete the consultation process. The 2017 Work Programme is set out in Figure 3.2 below.

Figure 3.2 2017 Work Programme



4 Experience and study team

4.1 CAG Consultants - **REDACTED**

4.2 Study team and Project management - **REDACTED**

4.3 Selected Experience of CAG and Team Members - **REDACTED**

5 Study Resources

REDACTED

6 Quality Assurance

6.1 Quality Assurance built in to method

Dave Lawrence the study director has previously produced the LESD and worked with the LESD for research purposes. We therefore understand the importance of having a precise database. One of the applications of the database is to inform transport forecasts and even relatively small errors in the data can affect public investment decisions.

In the method we have developed we continue to reiterate the importance of a clear audit trail and a database that is robust based on the most up to date information. Owing to the potentially large number of sources that can contribute to the database, a strict system of monitoring what goes in, what stays in and what is left out is needed. Each site will be given a unique ID number when it is identified as a potential for the database. This ID number system will remain the same regardless of how many sites are removed due to reasons such as overlaps, duplicates, old sites etc. Accompanying the ID number will be a source name and source reference. For example if we were to add an NLUD site from 2009 which has a reference of 100123456 then its entry into the database would read: ID: 1; Source: NLUD 2009; Source Ref: 100123456.

Once the database of potential sites has been constructed, a thinning out process will begin which will remove duplicated sites, deal with overlapping sites and expired sites. Any sites that are removed or altered in any way will be placed into a separate second database. This is to ensure that there will always remain a complete set of sites that can be referred back to. If a site has a duplicate in the separate second database then this will be indicated in the database.

The consultations with the Boroughs also provide us with a unique opportunity to test the data and review the quality of the information.

The final database is subjected to further validation and is also tested in the form of practical applications of the data to ensure that the outputs are consistent with expectations and other benchmark data.

6.2 Progress tracking

We will keep the client up to date with progress in three ways.

- We will hold fortnightly progress calls between the project manager and the client. Convenient times will be discussed at the inception meeting.
- There will be a structured sequence of progress reports.
- We will agree on formal meetings with the client group at the inception meeting.
- We propose to work in partnership with the GLA throughout the project

Our wider quality assurance system is summarised in the table below.

Table 6.1 CAG Consultant's quality assurance system

Objective	How we do this	Measure
Produce work that meets our clients' requirements	Designate a project manager for each job. Undertake a set up meeting with the client to agree objectives and approach. Provide draft material wherever a contract allows to ensure clients have an opportunity to review material prior to any reports being finalised. Ensure that clients have an opportunity to feedback at the end of a job via a client satisfaction questionnaire, and often through a 'closing' meeting.	Results of annual quality review and client feedback forms.
Establish good communications and feedback loops with clients so that objectives, timescales and approach can be responsive to needs	Work with the client to agree management and communication processes for the contract and adapting out approach to meet the clients' need. Provide one point of contact for each client. This point of contact changes only in exceptional circumstances and with the prior agreement of the client	As above
Provide well thought out, accurate and honest proposals for each contract	Ensure that proposals are reviewed and signed off by another member of staff.	Results of internal audit
Produce work that meets any legal or regulatory requirements	Project manager identifies any requirements at the beginning of a project and includes them in the project objectives. Where appropriate a quality assurance checklist will be used.	Use of quality assurance checklist in SAs.
Produce work that is well presented, free from error, and written in appropriate language	Provide an internal 'Project Supporter' and/or Quality Assurance Partner for each project whose role is to check quality of approach and written material.	Results of annual quality review and client feedback forms.
Produce work that accords with our values	As above and through inclusion of environmental statement in relevant reports, as required by our EMS.	EMS review of environmental statements Results of internal audit
Ensure that our associates understand and are committed to our quality policy and objectives	Ensure that our quality approach is reflected in our contracts with Associates and Partners.	Results of internal audit

Data protection

CAG Consultants complies with the requirements of the Data Protection Act (DPA) 1998. In compliance with the DPA, CAG Consultants is registered with the Information Commissioner's Office as a data controller -**REDACTED.**

6.3 Risk management

Throughout the proposal we have identified the principal risks with the quality of data and our proposals for mitigating this. The key risks and our proposed mitigation is summarised in the table below.

Table 6.2 Key Risks and Mitigation

Risk	Impact	Mitigation
Data Availability	The sources of data identified in the brief and proposal are critical to delivery of a robust database	We have already secured most of the data we need for this project.
Consultation Response	The principal delivery risk in terms of timetable is the borough consultations. Due to borough's own priorities and staffing levels in can sometimes take time to set up meetings. An inconsistent response can introduce bias.	Early notification of what we need. Clear and manageable presentation of data to consultee. Pool of interviewers to ensure all dates can be covered.
Data Quality	Data is drawn from a number of sources not all of which are quality assured. Potential impacts on both total capacity estimates and spatial distribution of capacity	Data is checked at source, through borough consultations and through final validation. This includes testing applications of the database. Extensive use of GIS to avoid duplication. Clear Audit Trail of all records. Sense checking by experienced professionals of final output.

APPENDIX 1

Borough Consultation Pro-forma

LESD Borough Consultations
Name(s) present
Interview details (date/time/place)
CAG Borough Manager
Number of sites to be discussed today

A brief introduction to LESD and aims of the meeting

What is it?

The LESD is a database that records employment developments in the pipeline and recently completed developments in London. The database is concerned with employment developments only.

What information does it contain?

The database is site specific. It shows:

1. the **precise location** of the development;
2. the **scale** of completed/ proposed/ planned development by employment use(floorspace; site size to be developed);
3. the **timetable** of the development (when will new jobs be created there?).

Where does the information come from?

The key sources of information are LDD, LBSR, UDP/ LDF. We also have some secondary data sources including Glenigan, Experian retail development data, Think London retail, Property Week, and area specific data to be provided by strategic partnerships.

Why is this database necessary?

The GLA develops employment forecasts at the Borough level. They use a so called triangulated method which relies on

1. your Boroughs existing employment growth path
2. your Boroughs potential employment growth path should your planning proposals/ permissions/ aspirations come to light
3. the transport accessibility within your Borough.

This database gives them the answer to point 2. So we need to know where employment is planned, the scale of it and the time this could be expected to come forward.

In addition to this the database is used for transport planning in London.

Why are we here today?

It is important that we get this database right. Therefore we need to speak to you about the information we have collected to validate it. We need to know:

1. Have we got the correct information (the location, the scale and the timetable of the site)?

2. Have we missed out on any major developments in your Borough? 3. What are your aspirations for the future?	
Site Review (not to discuss but to go through on the maps)	
Look at each map in the context of the main map. For each site confirm/ or not detail of:	
Site name	
What is planned? (for employment only)	
The scale of development (size of the site; floorspace planned)? (Office, Industry, Retail, Other)	
What is the planning status of the development/ site?	
The timescales involved – start and completion	
Site boundary **(draw/ confirm polygon)**	
Other sites not included same as above and draw on a map	
Other	
Where can we find additional information on the amendments and additional information you have provided?	

APPENDIX 2 – CVs - REDACTED