

Dyne House, Southwood Lane, London, N6**Summary Report on Planning Application Prepared for SRLA****1.0 Introduction**

A planning application was submitted in 2023 for a major redevelopment of Dyne House which includes a new single level basement in front of the existing building, significant alterations to the existing Dyne House and the demolition and reconstruction of all the buildings to the east (behind) at the rear of Dyne House. The site has a very significant slope from west to east. The proposals include a major new basement which varies between 3 storeys to 1 storey in depth.

Alan Baxter Ltd reviewed and provided comments on the proposals in 2023. Since that date various discussions have been held but there has been no revisions to the technical supporting documents. Revised architect's drawings have been submitted but there are no material changes to the basement arrangement.

2.0 Brief for this Report

- A. Do you consider that the site investigations carried out to date are adequate and are they out of date?
- B. Do you consider that the technical analysis that has been undertaken are inappropriate or wrong given the site conditions?
- C. Do you consider that it is appropriate to rely on dealing with such measures by providing conditions to a planning approval?
- D. Provide a summary of your view on any other aspects including the CMMP.

3.0 Commenting - A. Do you consider that the site investigations carried out to date are adequate and are they out of date?

3.1 There are three boreholes to the west of Dyne House, one of which is 24m deep, but the other 2 are shallow. Given the size of the single level basement in this area, this is about appropriate although one of the boreholes (No. 9) is too shallow and one is of limited use as it is only 6m deep – it would be normal for any borehole to extend to about 5m below the toe of any piles required for the project.

3.2 The basement to the rear of Dyne House is a much more substantial basement on a difficult sloping site. There is only a single 24m deep borehole on the site which, in my opinion is inadequate. There are some further boreholes beyond the site which are mostly shallow. Borehole 4 which is on the parade ground to the west of the large basement has some relevance but only to identify the junction between made ground and the underlying Claygate Beds.

While I am not aware of the purpose of the SI carried out in 2015, it does not appear that it was relevant to the current proposals. For a basement of the size proposed, and depth, I would expect to carry out 6 boreholes, of which at least 4 would be to ~24m and the others to be about 20m deep. Ground water monitoring should have been provided in at least 3 of these.

- 3.3 While the boreholes date from 2015, I consider that it is reasonable to use these, but they should be supplemented as noted above.
- 3.4 I consider that more extensive and up to date measurements of ground water levels should be carried out, which also needs further bores to be installed.
- 3.5 A number of trial pits have been carried out along the Northern boundary to examine the foundations of the existing retaining structures – these are adequate for planning but further investigations will be required if the project progresses.
- 3.6 I consider the site investigations and ground water monitoring to be inadequate for the scale of the basement proposed.

4.0 B. Do you consider that the technical analysis that has been undertaken are inappropriate or wrong given the site conditions?

- 4.1 The technical analysis which has been carried out is largely based on the empirical data set out in Circa C760. This document was intended for use with embedded retaining walls in London Clay, where the site is more or less level. The Circa report is based on data from case histories in these soil conditions.
- 4.2 The ground conditions here are Bagshot Beds over Claygate Beds, but the main issue is the very considerable level change across the site. The deflections of each wall section can be considered independently, but there is no mechanism in the Circa report that can take account of the overall lateral movement (sway) due to the unbalanced earth pressures between the high side towards the lower side. As a result, the empirical analysis will significantly underestimate the ground movements on the upslope side and overestimate them on the downslope side.
- 4.3 There is a total lack of consistency in the documents submitted in support of the Planning Application. The CMMP states that the basement will be formed using sheet piles and that ground anchors will be used to provide temporary lateral support. There is a very high risk that the ground anchors, in these ground conditions will slip resulting in substantial ground movements upslope from the basement. Ground anchors do not provide a stiff propping system.

However the ground movement assessment assumes that secant piled wall will be used with a stiff internal propping system. Also the ground movement assessment takes absolutely no account of the changes in level across the basement.

As such, it is impossible to comment on the proposals due to the total lack of consistency other than to say they are inconsistent and wrong. The resulting assessment of ground movements and damage is entirely fictitious.

- 4.4 Due to the length of the basement it is inevitable that diagonal props will be used for the two ends. If these are used in conjunction with sheet piled wall, this has a low in plane stiffness and so cannot provide a “high stiffness propping system”.
- 4.5 The approach used to assess ground movements on this site is inappropriate and significantly underestimates the ground movements or damage which will occur.
- 4.6 A 3D Finite Element analysis should be carried out to give a much better estimate of ground movements but this will require a much more definitive concept structural design, sequence of construction and temporary works proposal. There has been ample time to carry this out.

- 4.7 Regarding the impact of the basement on ground water levels, more information is required on the input data and assumptions made for the modelling carried out to date. This was requested more than 15 months ago but has not been provided.

GCG will comment further on this.

- 4.8 CRH have reviewed and commented on the basement proposal on behalf of Haringey Planning. They are also aware of the comments made by Alan Baxter and GCG. Their brief appears to be to comment on whether the various documents required as part of the planning process have been submitted rather than provide a view on how appropriate the proposals are.
- 4.9 I consider that the technical analysis submitted is inconsistent, inappropriate and wrong.

5.0 C. Do you consider that it is appropriate to rely on dealing with such measures by providing conditions to a planning approval?

- 5.1 Alan Baxter are currently involved on another project (in another Borough) which received Planning Consent for a redevelopment including a new single storey basement. Our involvement began when construction commenced on site. A review of the Basement Impact Assessment quickly revealed that many of the assumptions made were incorrect. A damage estimate of Cat 1 was predicted. CRH had again reviewed and signed off the documents. Damage is currently at Cat 4 and continuing to get worse.
- 5.2 Circa C760 was also used on this project but there was no recognition of the very poor ground conditions in the area.
- While the ground conditions at Dyne House are much better, it is still not appropriate to use Circa 760.
- It is not appropriate for very sloping sites, sheet piled walls, ground anchors or ill-defined propping systems.
- 5.3 While there were no specific conditions applied on the site referred to above, it was felt that the Party Wall Award process would protect the adjoining owners – it did not as the excavations which caused the major problems were outside the zones which required Party Wall Awards (as will occur at Dyne House).
- 5.4 Once a scheme receives Planning Consent, regardless of the Conditions imposed, it becomes very difficult, if not impossible, for an adjoining owner to have any say in what is done. The only recourse is to take out injunctions to stop the work when things go wrong which is a very risky and expensive option for everybody concerned.
- 5.5 In my opinion, the design of the basement for Dyne House should be developed now, either by the structural engineers or another consultant. A sequence and appropriate temporary works can then be specified following which a detailed analysis of ground movements can be carried out. This approach is standard on complex basements. There has been ample time to carry this out.
- 5.6 The designs developed can form the basis for a contractor to tender the project – they can set minimum standards for strength, deflections etc. of the retaining structures. The contractors will be free to propose alternative designs provided they meet or exceed the minimum requirements. This approach is quite common for complex basements.
- 5.7 If Conditions are applied to the planning consent, then it can only be the Local Planning Authority who discharge the Conditions, but they do not have the knowledge or expertise to do this.

While the adjoining owners can view and comment on the information submitted to discharge the submission, they can only provide views – they have no ability to enforce the final decision.

- 5.8 In my opinion, at planning stage, there should be sufficient information to support a basement proposal that is consistent across all the documents, that demonstrates how it will be designed and constructed without any risk of ground instability, disruption of the ground water flows and avoids significant ground movements. This is not the case, at Dyne House, and I fail to see how planning consent can be granted without this information.

In my opinion LBH would be in breach of their duty to property owners in the vicinity of Dyne House to grant planning permission on the basis of the current information on the planning portal, in the expectation that the inconsistencies and omissions can be dealt with via planning conditions. Planning conditions apply to points of detail and clarification. Here the information is wrong, wholly inappropriate and inadequate.

6.0 D. Provide a summary of your view on any other aspects including the CMMP.

- 6.1 As noted above, the proposals contained in the CMMP are inconsistent with the assumptions made in the ground movement assessment. Therefore this questions the validity and value of the whole document.
- 6.2 There are issues with the transport movement routes to and from the site where construction traffic is not permitted on parts of the route. This must be corrected to give a better indication of where the main HGV's routes will be.
- 6.3 In my opinion, the proposed deliveries using HGV's on Kingsley Place will be significantly higher than indicated in the CMMP. Access is difficult and will result in considerable disruption to the residents.
- 6.4 In my opinion the overall programme appears too short given the very difficult access arrangements and material movement logistics on this site, requiring multiple handling of materials by tower cranes which means the whole programme is dependent on the available craneage.
- 6.5 The CMMP should be updated to fully assess these points and also to form one part of a fully co-ordinated and consistent set of documents for planning.
- 6.6 The inconsistency between the BIA and the CMMP raises questions as to how the planning application could even have been validated when it was submitted. These inconsistencies invalidate the planning application in my opinion.