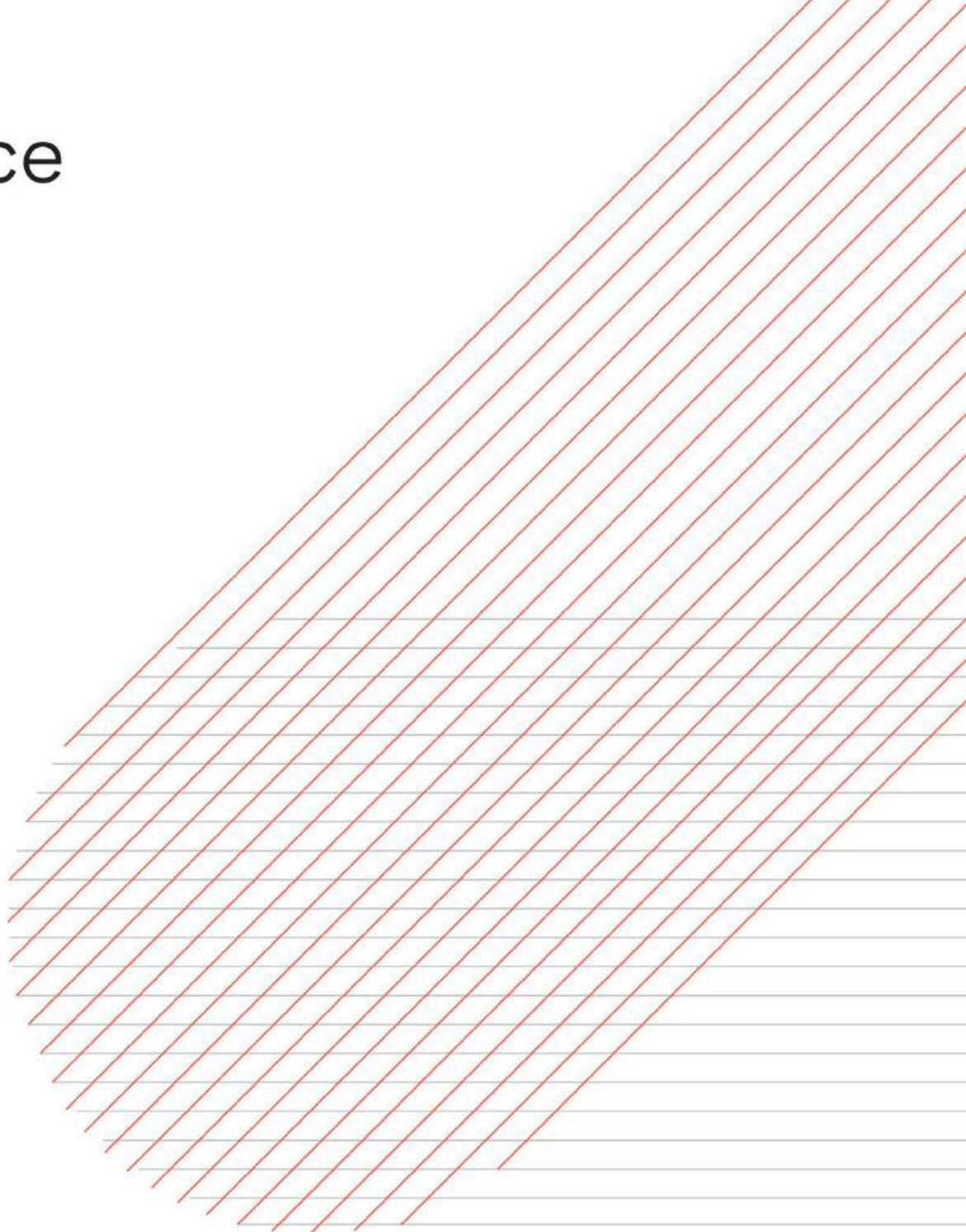




Holland Park, Spalding

Flood Risk Assessment

Ref: 102378-DCE-XX-XX-RP-C-0002

Holland Park, Spalding

Flood Risk Assessment

DATE: May 2026
REPORT REF: 102378-DCE-XX-XX-RP-C-0002

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Executive Summary

- 1.1.1. Dice Consulting Engineers Ltd (Dice) has been commissioned by Country Court Care Group to prepare a Flood Risk Assessment (FRA) in support of the proposed development at Shakespeare Way in Spalding. This assessment has been undertaken in accordance with the National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG), and the best practice in flood risk management.
- 1.1.2. The rectangular shaped land comprises an open grassed area and is classified as greenfield.
- 1.1.3. Annex 3 of the National Planning Policy Framework (NPPF) classifies the proposed development as 'More Vulnerable' under the Flood Risk Vulnerability Classification. According to the Environment Agency (EA) Flood Maps for Planning, the site is situated within Flood Zone 3, which is defined as land having a 1 in 100 (1%) or greater annual probability of river (fluvial) flooding. In accordance with the NPPF, more vulnerable developments located within Flood Zone 3 are subject to the Sequential Test and Exception Tests, which have been undertaken and are presented within this report.
- 1.1.4. Flood risk from surface water and small watercourses is very low across the site, with the exception of a small area located within the site's north-eastern corner, where an area at risk of flooding for the 1 in 100 year scenario can be found.

1. Introduction

- 1.1.1. Dice Consulting Engineers Ltd (Dice) has been commissioned by Country Court Care Group to undertake a Flood Risk Assessment (FRA) in support of the proposed development, which comprises a new care home and associated car park and access road.
- 1.1.2. This Flood Risk Assessment has been conducted in accordance with the National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG), and the best practices in flood risk management.
- 1.1.3. The assessment has been prepared using our best engineering judgement. The report is based on the following information:
- National Planning Policy Framework (NPPF)
 - Joint Lincolnshire Flood Risk and Water Management Strategy (2019);
 - South East Lincolnshire SFRA;
 - Environment Agency Online Flood Mapping Service
 - British Geological Survey Mapping
 - Environment Agency Product 4 Data;
- 1.1.4. All comments and opinions contained in this report, including any conclusions, are based on the information available to Dice at the time of writing the report. The conclusions drawn by Dice could therefore differ if the information is found to be inaccurate, incomplete, or misleading. Dice accepts no liability should this prove to be the case, or, if additional information exists or becomes available with respect to this site.
- 1.1.5. Dice has completed this report for the benefit of the organisations/individuals referred to in paragraph 1.1; and any relevant Statutory Authority which may require reference in relation to approvals for the proposed redevelopment of the site. Other third parties should not use or rely upon the contents of the report unless written approval has been gained from Dice.
- 1.1.6. Dice accepts no responsibility or liability for:
- a) the consequences of this documentation being used for any purpose or project other than that for which it was commissioned, and
 - b) this document to any third party with whom approval for use has not been agreed.

2. Site Description

2.1. Site Location and Surroundings

- 2.1.1. The rectangular shaped development site is located at Shakespeare Way, Spalding, PE11 1GU. National grid reference: E: 523357, N: 321388.
- 2.1.2. The site is classed as greenfield and is located it is bounded by an urban residential area to the north, south, east and west.
- 2.1.3. The site covers an area of approximately 0.48ha, of which, approximately 0.30ha is proposed to be impermeable.
- 2.1.4. The site is located within the jurisdiction of South Holland District Council, with the Lincolnshire County Council acting as the Lead Local Flood Authority (LLFA) for the site.
- 2.1.5. The approximate location of the site is illustrated in **Figure 2.1**.

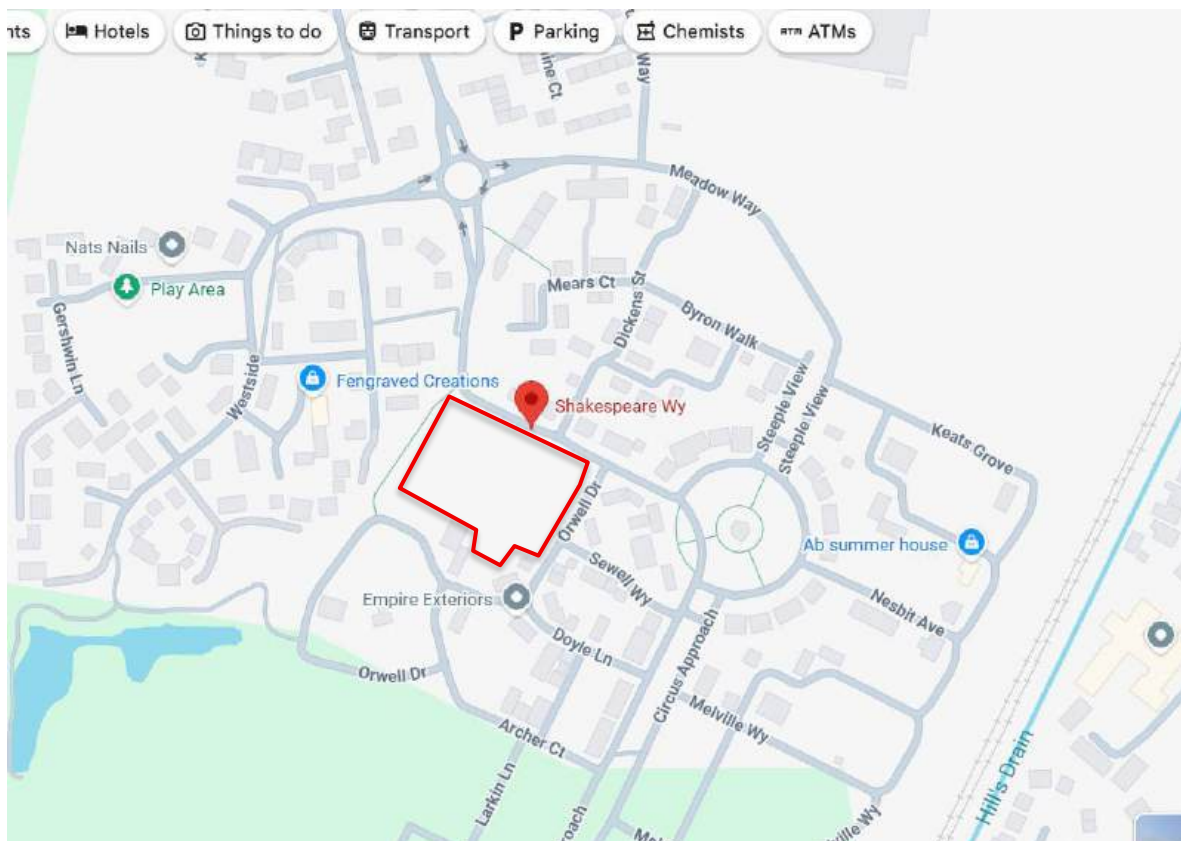


Figure 2.1: Site Location Plan

2.2. Proposal

- 2.2.1. The proposed development will comprise the erection of a 75 bedroom care home, a car park and associated access. The development proposals can be seen in **Appendix A**.

2.3. Topography

- 2.3.1. A topographical survey of the site was conducted by Three Sixty Group. A copy of the topographical survey can be seen in **Appendix B**.
- 2.3.2. The site is generally flat with minimal falls in all directions, with levels varying between 3.68m AOD and 3.41m AOD. The existing surrounding roads have similar topography, with the highest levels surrounding the site of 3.56mAOD located along the site's western and south-western boundaries and the lowest levels of 3.31 located along the site's northern and north-eastern boundaries.

2.4. Geology

- 2.4.1. A Phase 2 Geo-Environmental Report undertaken by Dice Environmental confirms that the site is covered by made ground comprising topsoil to a maximum depth of 0.4m below ground level (mbgl) underlain by soft, orange brown clay and silt to a depth of 4m.
- 2.4.2. The British Geological Survey mapping shows the site geology as follows:

Bedrock geology – Oxford Clay Formation. These sedimentary rocks are shallow-marine in origin. They are detrital, ranging from coarse- to fine-grained (locally with some carbonate content) forming interbedded sequences.

Superficial deposits - Tidal flat deposits-clay and silt. These sedimentary deposits are shallow-marine in origin. They are detrital, generally coarse-grained forming beaches and bars in a coastal setting.

2.5. Hydrology

- 2.5.1. The nearest watercourse to site is Hill's Drain, located approximately 300m to the east of the site, across a residential area and a railway line. This ditch flows towards the South Drove Drain to the south.
- 2.5.2. The River Welland, a Main River, is located 750m to the east and south-east from the site boundary. The River Welland is the primary flood risk source for the site and the Spalding area.

- 2.5.3. The River Welland flows in a north-easterly direction through Spalding, ultimately joining the North Sea.

2.6. Existing Drainage

- 2.6.1. A utility survey conducted by 360 Surveys, see **Appendix C**, indicates the presence of existing drainage infrastructure within the vicinity of the development.
- 2.6.2. Both existing foul water and surface water sewers are present under the surrounding roads.
- 2.6.3. Anglian Water have confirmed that the foul water sewers in the immediate vicinity of the site are privately owned under S104 agreement with the nearest public foul water sewers located approximately 50m to the north-west of the site, through Shakespeare Way. The Section 104 sewers connect into these public sewers downstream.
- 2.6.4. A pre-development was submitted to Anglian Water to confirm available capacity in their sewers to accommodate the proposed flows from site. The response states that both the Anglian Water foul water and surface water sewers have sufficient capacity to take the proposed flows. A copy of the pre-development enquiry response and the public sewer records can be seen in **Appendix D**.
- 2.6.5. The drainage survey for the site shows the presence of an existing foul water connection from site into the Section 104 foul water sewers. Therefore, it is likely that the Section 104 sewers have been designed to accommodate the proposed flows from site, subject to agreement with the adjacent developer. This is further evidenced by the proposed drainage plan for the adjacent housing development, available on the local planning portal and contained in **Appendix E**, which shows a connection from the care home site into the Section 104 sewers. The existing S104 sewers are the preferred outfall from the proposed development site, however, failing to obtain agreement from the adjacent developers to utilise those sewers, a direct connection into the public sewers to the north of the site will be proposed.
- 2.6.6. The 360 group surveys show the presence of a 1200mm diameter surface water culverts both to the north and west of the site, with the culvert to the north being under a Section 104 agreement and the culvert to the west being public sewer. Both the 1200mm diameter culverts have 5m easements on each side (10m centered). Similarly to the foul water sewers, the drainage plan for the adjacent residential development shows a connection from the care

home into the public surface water culvert to the west of the site. A Tier 2 Pre-development enquiry was submitted to Anglian Water to confirm capacity in their sewers to accommodate the proposed flows from site. A response to this is yet to be received, however, judging by the adjacent development drainage drawings, it is deemed that capacity will be available.

2.7. Artificial Water Bodies

- 2.7.1. The Environment Agency's 'Risk of flooding from Reservoirs' map indicates that no areas of the site are at risk of flooding from reservoirs.

3. Policies

- 3.1.1. This Flood Risk Assessment has been prepared in accordance with relevant national and local planning policies, associated guidance, and recognised best practice in flood risk management.

3.2. National Planning Policy Framework (NPPF)

- 3.2.1. The National Planning Policy Framework (Ref. 4) sets out the Government's objectives for the planning system and how there should be a 'Presumption in Favour of Sustainable Development' and the planning system should facilitate and promote sustainable patterns of development, avoiding flood risk and accommodating the impacts of climate change. The document seeks to ensure that flood risk is considered at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. Reference should also be made to the Planning Practice Guidance (Ref. 15) which provides additional guidance on flood risk.
- 3.2.2. The NPPF states that when determining planning applications in areas of flood risk Local Planning Authorities must ensure that flood risk is not increased elsewhere and only consider developments appropriate where a site-specific FRA can demonstrate that:
- within the site, the most vulnerable development is located in areas of lowest flood risk unless there are overriding reasons to prefer a different location; and
 - development is appropriately flood resilient and resistant, including safe access and egress, where required, and that any residual risk can be safely managed, including by emergency planning; and it gives priority to the use of sustainable drainage features.
- 3.2.3. For the purposes of applying the National Planning Policy Framework, areas at risk from all sources of flooding are included. For fluvial (river) and sea flooding, this is principally land within Flood Zones 2 and 3. It can also include an area within Flood Zone 1 which the Environment Agency has notified the local planning authority as having critical drainage problems.
- 3.2.4. The Flood and Water Management Act helps improve flood risk management and ensure the security of water supplies in England and Wales. This updates legislation to ensure better protection from flooding, manage water more sustainably, improve public services, and secure water resources during periods of drought.

3.2.5. The Flood and Water Management Act helps to reduce flood risk by:

- Clarifying who is responsible for managing all sources of flood risk;
- Encouraging more sustainable forms of drainage in new developments;
- Makes it easier to resolve misconnections to sewers.

3.3. Flood and Water Management Act 2010

3.3.1. The Flood and Water Management Act imparts significant new roles and responsibilities on local authorities. County or unitary authorities are now classed as lead local flood authorities (LLFAs) who have responsibilities for managing local flood risk.

3.3.2. The responsibilities of a LLFA include:

- Prepare and maintain a strategy for local flood risk management in their areas; coordinating views and activity with other local bodies; and communities through public consultation and scrutiny, and delivery planning.
- Maintain a register of assets – these are physical features that have a significant effect on flooding in their area.
- Investigate significant local flooding incidents and publish the results of such investigations.
- Issue consents for altering, removing, or replacing certain structures or features on ordinary watercourses.
- Play a lead role in emergency planning and recovery after a flood event.

3.4. Planning Practice Guidance on Flood Risk & Coastal Change – 2022

3.4.1. The Government's planning policy on sustainable drainage systems came into effect on 22 August 2022. It centres on local planning policies and decisions on planning applications relating to major development (those of 10 or more dwellings; or equivalent non-residential; or mixed developments). It ensures that sustainable drainage systems for the management of run-off are put in place, unless demonstrated to be inappropriate. Lead Local Flood Authorities (LLFAs) have also been made statutory consultees and new non-statutory guidance has been published under the changes.

3.4.2. The changes follow a joint DEFRA/DCLG consultation on delivering SuDS published in September 2014 in which the Government dropped all the key provisions of Schedule 3 of the

Flood & Water Management Act 2010 and SuDS Approval Bodies (SABs) in favour of passing oversight of SuDS from county councils (who are also LLFAs) to local planning authorities. According to the new planning policy, the following are expected of local planning authorities when considering planning applications:

- To consult the relevant lead local flood authority on the management of surface water;
- To satisfy themselves that the proposed minimum standards of operation are appropriate;
- To ensure, using planning conditions or planning obligations, that there are clear arrangements in place for ongoing maintenance over the lifetime of the development.

3.4.3. The policy also states that the sustainable drainage systems should be designed to ensure that the maintenance and operation requirements are economically proportionate.

3.5. Strategic Flood Risk Assessment (SFRA)

3.5.1. The National Planning Policy Framework (NPPF) requires that Local Plans should be supported by a Strategic Flood Risk Assessment (SFRA). The SFRA identifies areas that may flood, considering all potential sources of flooding. It is used to inform planning policies and assist Local Planning Authorities in directing new development to areas of lower flood risk and ensure that new development helps to manage flood risk.

3.6. Preliminary Flood Risk Assessment (PFRA)

3.6.1. The purpose of the PFRA is to report 'Nationally Significant Areas of Flood Risk' to the EU from all flooding sources, except Main River and Reservoir which falls under the remit of the EA, and the public sewer network which falls under the remit of the water authority.

3.6.2. In line with requirements set out in the Flood Risk Regulations (2009), which was transposed from the European Floods Directive 2007/60/EC, a preliminary Flood Risk Assessment has been completed by the Environment Agency. With this, areas across the country at significant risk of rivers, sea, or reservoir flooding have been identified. PFRAs assess the past and future flood risk which may have significant consequences for human health, the economy, the environment, and cultural heritage.

- 3.6.3. Regulations require the Environment Agency to undertake PFRA for risk of flooding from rivers, sea, and reservoirs. Whilst Lead Local Flood Authorities (LLFAs) complete these for surface water, smaller watercourses, and groundwater flooding.

3.7. Joint Lincolnshire Flood Risk and water management Strategy FRWMS

- 3.7.1. The FRWMS was developed to tackle flooding and water management challenges across Lincolnshire through a shared approach. It brings together local authorities, the Environment Agency, Internal Drainage Boards, and water companies to work towards long-term resilience. The document sets out a vision to better protect people, places, and infrastructure from flood risks up to the year 2050, reflecting the growing pressures of climate change, urban growth, and aging infrastructure.
- 3.7.2. The strategy focuses on reducing flood risk, improving how water is managed across the county, and strengthening communities' ability to cope with flooding. It outlines seven key ambitions, including smarter water use, stronger infrastructure, better planning, and increased community involvement. The strategy is intended to be a long-term plan that aims to make Lincolnshire more resilient over time.
- 3.7.3. The strategy seeks to integrate flood risk management into planning. It highlights the need to account for flood risk and water management at an early stage of planning.

4. Vulnerability to Flooding

4.1.1. The National Planning Policy Framework (NPPF), Annex 3, classifies all types of development according to their vulnerability to flood risk. The classification of developments is as follows:

4.1.2. Essential Infrastructure

- Essential Infrastructure includes services vital to society that must remain operational during floods, such as hospitals, emergency services, fire and police stations, electricity and water supply facilities, sewerage plants, and telecommunications.

4.1.3. Highly Vulnerable

- Highly Vulnerable development covers use with a serious risk to life or property, including non-essential emergency facilities, basement homes, and permanent mobile homes or caravans.

4.1.4. More Vulnerable

- More vulnerable development refers to residential, commercial, and institutional uses, such as houses, schools, non-critical hospitals, hotels, shops, offices, and light industrial units, which are sensitive to flooding but less life-threatening.

4.1.5. Less Vulnerable

- Less Vulnerable development includes agriculture, forestry, outdoor recreation, car parks, and non-residential storage, which are generally resilient to flooding and do not increase flood risk elsewhere.

4.1.6. Water-Compatible

- Water-Compatible development comprises uses that can safely occupy flood-prone areas, such as docks, marinas, flood management infrastructure, boating facilities, amenity open spaces, and footpaths or cycle paths.

4.1.7. The proposed development is a care home and is therefore classified as more vulnerable. Appropriate measures have been reviewed within this report and will be implemented to ensure that flooding does not affect the operation of the site throughout the lifetime of use.

5. Flood Risk to the Site

5.1. Fluvial Sources

- 5.1.1. Fluvial flooding occurs when the natural capacity of rivers, streams, or ditches is exceeded by periods of heavy rainfall, which leads to a rise in the water levels and the overtopping of their banks. This water will flow onto adjacent low-lying areas which results in flooding.
- 5.1.2. The Environment Agency provides online mapping to identify the flood risks at the location of the proposed development. This service has been used to understand what zone the proposed development site is located in, with respect to fluvial flooding. An extract of this is shown in **Figure 5.1** below.

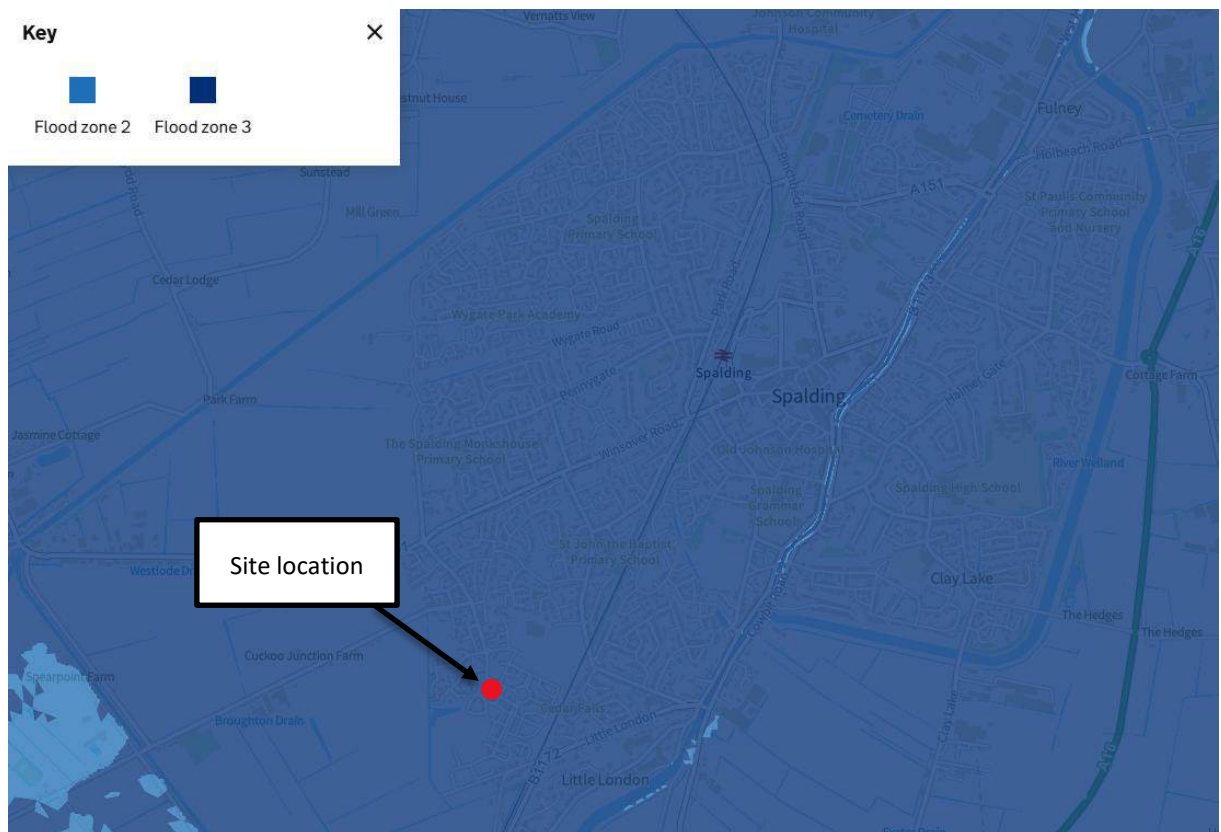


Figure 5.1: EA Flood Map for Planning (Flood Zones 2 and 3)

- 5.1.3. As per **Figure 5.1** The site is identified in the Flood Map for Planning as being within Flood Zone 3. The EA classifies Flood Zone 3 as high probability of flooding with a 1 in 100 (1%) or greater annual probability of river flooding or 1 in 200 or greater annual probability of sea flooding (0.5%) in a given year. For the site in question, the Flood Map for planning identifies that the

main source of flooding is from rivers. However, the flood map for planning does not account for existing flood defences, which means that the site and most of the surrounding areas are at risk.

- 5.1.4. The product 4 data for the site was provided by the Environment Agency. The data contains a map of the modelled flood extents (with defences) for the Spalding area. The maps shows that the site benefits from flood defences and that the area of the site sits fully outside the flood extents for all modelled flood events of up and including the 1 in 1000 years plus 20% climate change. The Product 4 data also provides flood water level at a number of nodes along the length of The River Welland channel with water levels shown to reach 4.67mAOD for both the 1 in 100 years plus 20%CC and the 1 in 1000 years plus 20%CC. Although the flood levels here are higher than the existing ground levels at the proposed site, as the site benefits from flood defences and is not at risk from flooding in a defended scenario, the risk of fluvial flooding on site is considered low. The Product 4 data can be seen in **Appendix F**.
- 5.1.5. The Flood Map for Planning shows that Flood Zone 3 extends for kilometres in all directions from and around the site with most of South Holland being in Flood Zone 3. If strict adherence to the guidelines was followed, development would become near impossible in much of the region. To prevent this, the South East Lincolnshire SFRA has been framed to ensure that there is sufficient information around which to base design decisions on. Maps within the SFRA have been used to further guide understanding of the flood risk to the site. The Residual Peak Depth, South Holland, 2115 1% Fluvial/ 0.5% Tidal Event Probability map and the Residual Peak Velocity, 2115 day map have been assessed. The residual Peak velocity map forecasts both the consequences of a defences breach and breach overtopping over the next 100 years. The maps can be found in **Appendix G**.
- 5.1.6. Both maps show that no part of the site is at risk of Tidal or Fluvial Flooding. Appendix C of the South East Lincolnshire SFRA provides guidance on Finished Floor Levels based on the different depths of flooding established in the Residual Peak Depth map. The total site area is approximately 0.48ha, therefore, as per the South East Lincolnshire Standing Advice Matrix, contained in **Appendix H**, the proposed development is classified as non-major 'More Vulnerable'. However, as the site area is very close to the limit for a major 'More Vulnerable' classification, the recommendations for this category will be followed when determining the proposed finished floor level for the building and the recommended mitigation measures. As

such, it is proposed to set the FFL of the proposed care home to 300mm above the existing ground levels. As the existing ground levels on site are no higher than 3.68mAOD, it is proposed to set the proposed finished floor levels of the building to 3.98mAOD.

- 5.1.7. As set out in the NPPF, all developments classified as “more vulnerable” and located within Flood Zone 3 must undertake an exception test to understand the effects of flooding on the development and justify its location within Flood Zone 3, while ensuring safety during the development lifetime and ability to operate during flood events. An exception test has been completed further within this report. This can also be identified in Table 2 of the National Planning Practice Guidance shown below.

Sequential Test

- 5.1.8. As mentioned above, large parts of the South Holland District lie within Flood Zone 3. The below are extracts from the SFRA:
- 5.1.9. Due to the extent of flood risk in the South Holland District, it is necessary to use the refined flood risk information (Hazard and Depth maps) to assist with the application of the Sequential Test.
- 5.1.10. A sequential test has been undertaken by the South East Lincolnshire Joint Planning Unit, using the mapping outputs contained in the SFRA. The Breach Hazard Map for the 2115 scenario was used for this assessment (as the NPPG requires residential development lifetime to be considered for a minimum 100 years). Where there were sites within a settlement in the same hazard category, it was necessary to use the information on flood depth (again in the 2115 breach scenario) to choose the most sequentially preferable.
- 5.1.11. The NPPF advocates that the Sequential Test should be applied to all forms of development in medium and high risk areas (Flood Zones 2 or 3), other than sites which have been allocated in the Local Plan. The proposed site sits in an area allocated for housing within the Local Plan. The allocation map can be seen in **Appendix I**.
- 5.1.12. Furthermore, as the South East Lincolnshire Strategic Flood Risk Assessment (SFRA) indicates that the site itself is not at risk of flooding despite its Flood Zone 3 designation, it is considered that development here does not conflict with the overall objectives of directing vulnerable uses away from areas of greatest flood hazard. On this basis, it is considered that

there are no other reasonably available alternative sites in lower flood zones, and the Sequential Test is satisfied.

Exception Test

- 5.1.13. Exception Tests require evidence that the proposed development provides wider sustainability benefits that outweigh flood risk, and that it can be made safe for its lifetime without increasing flood risk elsewhere.
- 5.1.14. The proposed care home provides significant community benefits, including increased capacity for elderly and vulnerable residents in the area, supporting local employment and enhancing local social infrastructure.
- 5.1.15. Furthermore, the South East Lincolnshire SFRA confirms that the site itself is not at risk of flooding, and the design will incorporate appropriate resilience measures, floor level management, and sustainable drainage features to ensure the development remains safe and does not increase flood risk elsewhere. On this basis, the proposal clearly delivers sustainability benefits and can be made safe from flood risk, and therefore it is considered to Exception Test.

Flood Risk Vulnerability classification	Essential Infrastructure	Water compatible	Highly Vulnerable	More Vulnerable	Less Vulnerable
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	✓	Exception Test Required	✓	✓
Zone 3a	Exception Test Required	✓	X	Exception Test Required	✓
Zone 3b 'Functional Floodplain'	Exception Test Required	✓	X	X	X

Table 1: Copy of Table 2 (Flood Risk Vulnerability and Flood Zone 'compatibility') from the National Planning Practice Guidance.

5.2. Pluvial Sources/ Surface Water Flooding

- 5.2.1. Pluvial flooding occurs when natural and engineered systems have insufficient capacity to deal with the volume of rainfall. Pluvial flooding can sometimes occur in urban areas during an extreme, high intensity, low duration summer rainfall event which overwhelms the local surface water drainage systems, or in rural areas during medium intensity, long duration events where saturated ground conditions prevent infiltration into the subsoil. This flood water would then be conveyed via overland flow routes dictated by the local topography.
- 5.2.2. Surface water flood risk has been assessed using the Environment Agency Flood Map for Planning service. Relevant extracts are provided in Figures 5.2, 5.2.1, and 5.2.2. The mapping identifies surface water flooding for annual likelihoods of 1 in 30 (3.33%), 1 in 100 (1%), and 1 in 1,000 (0.1%) years. The maps indicate that a portion of the site is at risk of flooding in both the 1 in 100-year scenario or the 1 in 1000-year scenario.



Figure 5.2: EA Flood Map for Planning (Surface Water Flooding 1 in 30 year)



Figure 5.2.1: EA Flood Map for Planning (Surface Water Flooding 1 in 100 year)

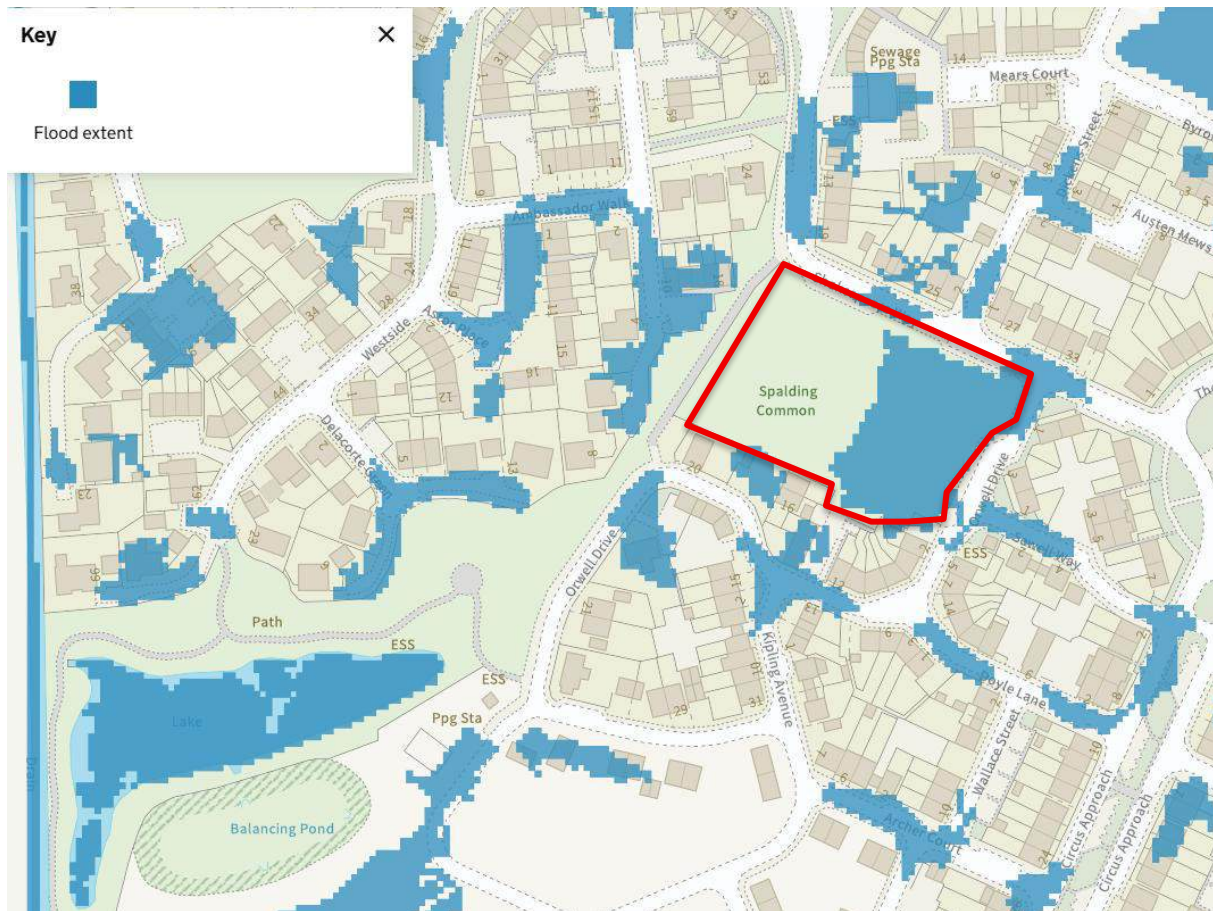


Figure 5.2.2: EA Flood Map for Planning (Surface Water Flooding 1 in 1000 year)

5.2.3. Review of the maps indicate that the areas at risk of surface water flooding are those low-lying areas where water would naturally accumulate in extreme rainfall events – over the 1 in 30 years scenario. A suitable proposed levels strategy, designed to direct any residual overground flooding towards the external hardstanding areas and away from the proposed building and a drainage design, based on sustainable principles, will significantly reduce the risk of this localised surface water flooding affecting the proposed development. Therefore, surface water is not considered to pose a significant flood risk to the site.

5.3. Sewer Sources

- 5.3.1. As identified previously within this report, there are both surface water and foul water drainage systems within the vicinity of the site.
- 5.3.2. The foul water pre-development enquiry response provided by Anglian Water does not highlight any capacity issues of the foul water sewers in the vicinity of the site. Furthermore,

the adjacent development surface water drainage strategy shows that the design of the sewers surrounding the site has been based on sustainable drainage principles and that the sewers have been designed to accommodate all storm events of up to and including the 1 in 100 years storm event plus 30% climate change. In the unlikely event of sewer flooding occurring adjacent to the site, the exceedance flows will be retained within the lower situated Shakespeare Way kerbs and will not pose a flood risk to the development. Therefore, the risk of sewer flooding affecting the site is considered low.

5.4. Tidal/Coastal

- 5.4.1. This site is not coastal and therefore not affected by coastal or tidal flooding.

5.5. Groundwater Sources

- 5.5.1. Groundwater flooding occurs as a result of water rising from the underlying aquifer or from water flowing from abnormal springs. This can occur after prolonged periods of sustained high rainfall, and the areas at most risk are often low-lying where the water table is more likely to be at shallow depth. Groundwater flooding is known to occur in areas underlain by major aquifers, although increasingly it is also being associated with more localised floodplain soils.
- 5.5.2. There is no evidence of groundwater flooding on site. Furthermore, during the site investigation works, undertaken by Dice Environmental in March 2026, groundwater was found to be fairly deep with depths between 2.3 and 2.4m below ground level. Therefore, the risk of groundwater flooding at the application site is considered to be low.

6. Flood Mitigation Measures

6.1.1. All new developments are required to provide safe access and egress during a flood event, as indicated in Chapter 13 of the DEFRA Flood Risk Assessment Guidance for New Development- Technical report (FD2320/TR2) and current Planning Practice Guidance on Flood Risk. The requirements for new developments in areas in flood risk are as follows, listed in order of preference:

- Safe dry route for people and vehicles;
- If a dry route for people is not possible, a route for people, where the flood hazard is low (in terms of depth and velocity) and should not cause a risk to people;
- If a dry route for vehicles is not possible, a route for vehicles where the flood hazard is low (in terms of depth and velocity) to permit access for emergency vehicles.

However, the public should not drive vehicles in floodwater.

6.1.2. As established in Section 5.1 of this report, although the site is identified in the Flood Map for Planning as being in Flood Zone 3, the EA maps do not take into account the existing defenses that protect the area. Therefore, Southeast Lincolnshire SFRA and its guidance have been used to assess appropriate and proportionate mitigation measures on site.

6.1.3. Following the finding in Section 5.1, the site is not at risk of flooding from fluvial or tidal sources. However, as the site area is very close to the limit for a major 'More Vulnerable' classification, it is proposed to set the finished floor level of the proposed care home to 300mm above the existing ground levels. As the existing ground levels on site are no higher than 3.68mAOD, it is proposed to set the proposed finished floor levels of the building to 3.98mAOD.

6.1.4. All new developments are required to provide safe access and egress during a flood event, as indicated in Chapter 13 of the DEFRA Flood Risk Assessment Guidance for New Development- Technical report (FD2320/TR2). The requirements for new developments in areas in flood risk are as follows, listed in order of preference:

- Safe dry route for people and vehicles;

- If a dry route for people is not possible, a route for people, where the flood hazard is low (in terms of depth and velocity) and should not cause a risk to people;
- If a dry route for vehicles is not possible, a route for vehicles where the flood hazard is low (in terms of depth and velocity) to permit access for emergency vehicles. However, the public should not drive vehicles in floodwater.

6.1.5. Following the above, the proposed site is not at risk of flooding as established in the South East Lincolnshire SFRA, therefore all routes west out of the building are safe and dry.

6.1.6. The following mitigation measures are recommended to ensure adequate protection to any new site developments in the event of flooding:

- A suitable Evacuation Plan must be implemented.
- In the event of flooding, buildings and structures should be capable of withstanding the potential lateral loading associated with a flood event. Further consideration of materials used within the flood extents is recommended.
- The finished floor level (FFL) will be set 300mm above the existing ground levels on site. Therefore, the minimum finished floor level should be set to a minimum of 3.98mAOD
- The development should be enrolled in the Environment Agency's Flood Warning Service, and a robust, site-specific Flood Warning and Evacuation Plan should be developed and agreed with the relevant stakeholders to document the actions to take in the event of a flood.
- The plan should be maintained and operated by the care home and regularly updated.
- The plan should be clearly displayed in all public areas.
- The introduction of SuDS into the site as a feature of the Drainage Strategy.

7. Flood Risk from the Development

- 7.1.1. The requirements of a Site-Specific Flood Risk Assessment, as outlined in the National Planning Practice Guidance should assess the following off-site impacts.
- How will it be ensured that the proposed development and the measures to protect the site from flooding will not increase flood risk elsewhere?
 - How will run-off from the completed development be prevented from causing an impact elsewhere?
- 7.1.2. The Environment Agency 'Flood Risk Assessments – Climate Change Allowances', updated in May 2022 provides support to the National Planning Policy Framework on the impacts of climate change on flooding from the land, rivers and sea as part of a Flood Risk Assessment. The biggest difference on this revision of the EA document is that there are specific allowances depending on the location across England. The EA provides maps for both peak rainfall allowances and peak river flow allowances and these need to be followed.
- 7.1.3. The information provided by the EA contains tables showing anticipated climate change allowances for peak rainfall in the site location by type of development. For the 100 year+ design life of a care home development, for the Welland Management Catchment the 40% climate change factor should be applied to the 1 in 100-year storm (1%) and 35% applied to the 1 in 30-year storm (3.3%).
- 7.1.4. In accordance with Environment Agency climate change allowances for peak rainfall, the proposed surface water drainage infrastructure will be designed to accommodate all storm events up to and including the 1 in 100-year event, with an allowance for a 40% increase in rainfall intensity due to climate change.

8. Surface Water Drainage Strategy

8.1. Sustainable Drainage Features

- 8.1.1. Surface water arising from a developed site should, as far as practical, be managed in a sustainable manner to mimic the surface water flows arising from the undeveloped site.
- 8.1.2. In line with the National Standards for Sustainable Drainage Systems (SuDS), surface water must be discharged in accordance with the following priority hierarchy, with priority 1 being the highest and priority 5 being the lowest.
- Priority 1: collected for non-potable use
 - Priority 2: infiltrated to ground
 - priority 3: discharged to an above ground surface water body
 - priority 4: discharged to a surface water sewer, or another piped surface water drainage system
 - priority 5: discharged to a combined sewer.
- 8.1.3. Disposal of surface water run-off by the preferred method of infiltration is subject to appropriate soil conditions. Infiltration testing undertaken by Dice Environmental show that the site is underlain with impermeable strata. Therefore, the use of soakaways on site is deemed unfeasible. A copy of the soakaway test results can be seen in **Appendix J**.
- 8.1.4. There are no existing watercourses in the vicinity of the site where surface water can be discharged to, therefore, it is proposed to discharge surface water to the public surface water sewer to the west of the site at 2l/s to minimise the risk of blockages to the flow control. A package surface water pumping station is proposed downstream from the flow control. This will pump the surface water flows into the public sewers at 5l/s, which is the minimum discharge rate to be used with surface water pumping stations to minimise the risk of blockages and pump failure. Due to the presence of a flow control prior to the pump, the discharge rate from site will not exceed 2l/s.
- 8.1.5. The National Standards Sustainable Drainage Systems - Non-statutory technical standards for sustainable drainage systems – March 2015 that deals with SuDS covers the whole range of sustainable approaches to surface water drainage management including:

- Source control measures including rainwater recycling;
- Infiltration devices to allow water to soak into the ground, that can include individual soakaways and communal facilities;
- Filter strips and swales, which are vegetated features that hold and drain water downhill mimicking natural drainage patterns;
- Filter drains and porous pavements to allow rainwater and run-off to infiltrate into permeable material below ground and provide storage if needed; and
- Basins and ponds to hold excess water after rain and allow controlled discharge that avoids flooding.

8.1.6. Each of the SuDS considerations listed above are discussed below with reference to their potential suitability for the proposed development, once proposals are clear.

SuDS Measures	Component	Feasibility for the site	Issues/ Description
Source Control	Rainwater Harvesting	Yes	This may be applied in the form of water butts which may be used in gardening.
Infiltration Devices	Permeable paving	Yes	Permeable paving is considered feasible to be utilised as a filtration and storage feature but not for infiltration purposes.
	Private soakaways	No	Inappropriate geology precludes this option.
Filtration	Open Swales	No	Insufficient space precludes the use of swales
	Filter Drains	Yes	Filter drains are deemed feasible on site as filtration features.

Retention/ Detention	Detention Basins	No	Insufficient space and safety concerns with elderly care home residents precludes the use of basins.
	Attenuation Ponds	No	Insufficient space and safety concerns with elderly care home residents precludes the use of basins.

8.2. Surface Water Drainage Strategy

- 8.2.1. When assessing surface water discharge from a proposed development, the aim is to ensure that runoff is treated at source and managed in a way that minimises negative impact of the development on flood risk, the structure and form and water quality of receiving waters and the associated ecology.
- 8.2.2. The surface water strategy consists of a surface water drainage network that will collect runoff from the proposed care home, car park and access road and discharge this into the adjacent public surface water sewers located to the west of the site at a proposed discharge rate of 2l/s.
- 8.2.3. The proposed development will consist of an approximate impermeable area of 0.30ha.
- 8.2.4. Causeway Flow was used to model the proposed surface water system on site for the 1 in 100 years plus 40% climate change allowance, the 1 in 30 years plus 35% climate change allowance and the 1 in 2 year storm events. The total estimated attenuation volume required on site is 250m³ and is proposed to be stored within permeable paving and a cellular attenuation tank. It is proposed that the surface water network will remain private and will be maintained by the care home maintenance team on site.
- 8.2.5. The proposed drainage strategy will be subject to agreement with the Lead Local Flood Authority and the Local Planning Authority.
- 8.2.6. The proposed site drainage layout is shown in **Appendix K**.
- 8.2.7. The proposed drainage calculations are included in **Appendix L**.

9. Foul Water Strategy

- 9.1.1. The drainage strategy proposes to discharge foul water from site to the Section 104 public sewers to the north of the site under Shakespeare Way. Alternatively, a direct connection into the Anglian Water sewers will be proposed, should a connection into the S104 sewers is found to be unfeasible.

10. Conclusions

- 10.1.1. Dice Consulting Engineers Ltd (Dice) has been commissioned by Country Court Care Group to prepare a Flood Risk Assessment (FRA) in support of the proposed development at Shakespeare Way in Spalding. This assessment has been undertaken in accordance with the National Planning Policy Framework (NPPF), Planning Practice Guidance (PPG), and the best practice in flood risk management.
- 10.1.2. The Environment Agency (EA) Flood Map for Planning indicates that the site is located within Flood Zone 3, where most of the site is at high risk from fluvial flooding, with an annual probability of greater than 1 in 100 (1%) each year. However, the Southeast Lincolnshire Strategic Flood Risk Assessment (SFRA) indicates that the site itself is not at risk of flooding despite its Flood Zone 3 designation, therefore it is considered that the development does not conflict with the overall objectives of directing vulnerable uses away from areas of greatest flood hazard.
- 10.1.3. A sequential and exception test has been undertaken to justify the location of the proposed development, both of which are considered passed.
- 10.1.4. The results of the sequential test and exception test demonstrate that the development located in Flood Zone 3 is acceptable.
- 10.1.5. The following mitigation measures are recommended to ensure adequate protection to any new site developments in the event of flooding:
- A suitable Evacuation Plan must be implemented.
 - In the event of flooding, buildings and structures should be capable of withstanding the potential lateral loading associated with a flood event. Further consideration of materials used within the flood extents is recommended.
 - The finished floor level (FFL) will be set 300mm above the existing ground levels on site. Therefore, the minimum finished floor level should be set to a minimum of 3.98mAOD
 - The development should be enrolled in the Environment Agency's Flood Warning Service, and a robust, site-specific Flood Warning and Evacuation Plan should be

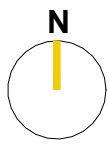
developed and agreed with the relevant stakeholders to document the actions to take in the event of a flood.

- The plan should be maintained and operated by the care home and regularly updated.
- The plan should be clearly displayed in all public areas.
- The introduction of SuDS into the site as a feature of the Drainage Strategy.

11. References

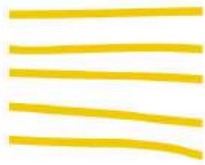
1. The Building Regulations 2015 Approved Document H
2. Design and Construction Guidance – Version 2.3 June 2023
3. National Planning Policy Framework
4. The SuDS Manual – CIRIA C753
5. British Geological Survey – Geology of Britain viewer <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
6. Environment Agency web based interactive maps, <https://flood-map-for-planning.service.gov.uk/>
7. Flood and Water Management Act 2010
8. Water Industry Act 1999
9. National standards for sustainable drainage systems (SuDS)

Appendix A – Site Plan

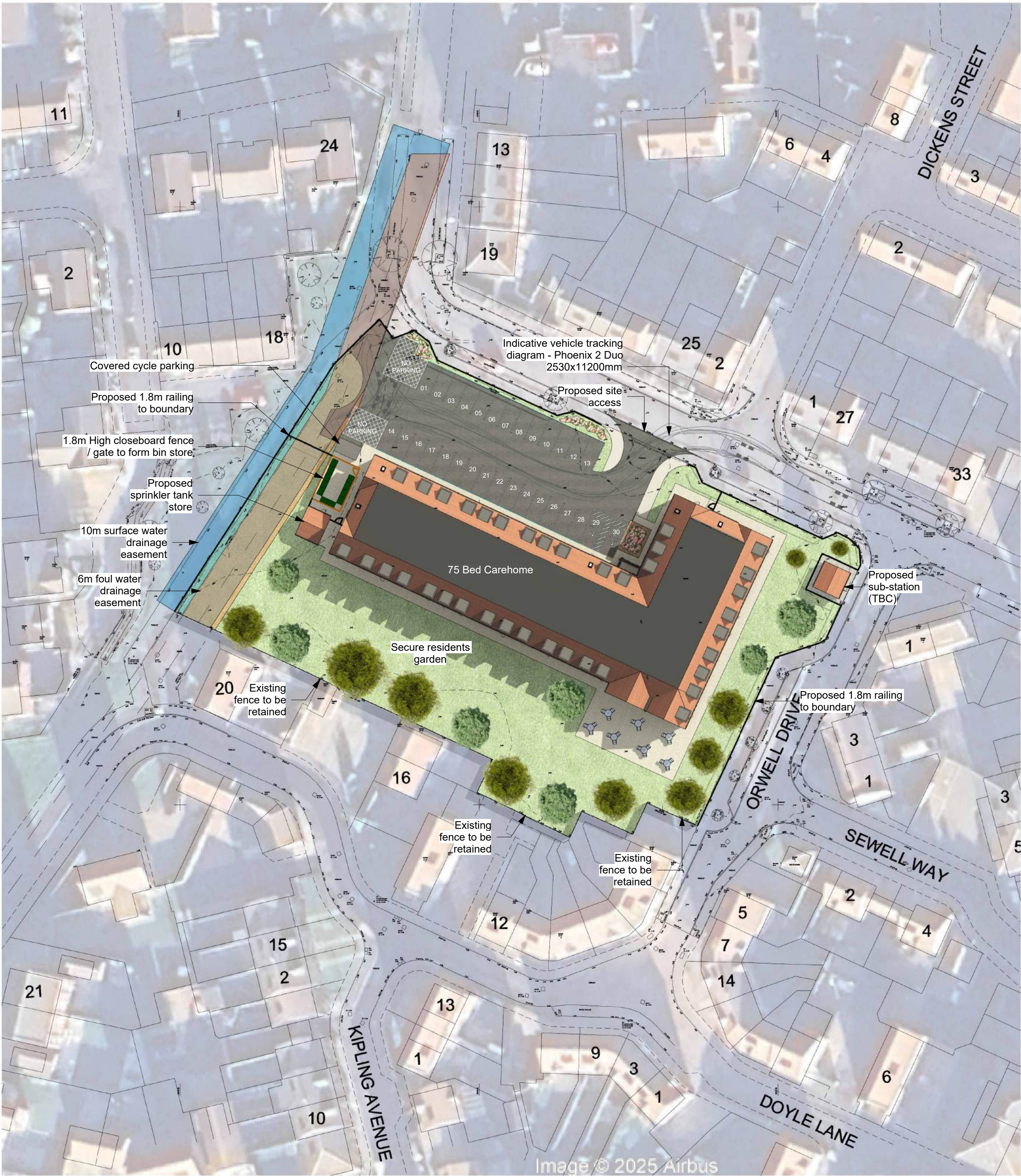


0 5 m 10 m

DRAFT FOR COMMENT ONLY



(10) 002



Site Plan
1 : 500

Boundary treatments key:

— = 1.8m High closeboard timber fence / gate

— = 1.8m High black railing / gate



Client: Country Court Care
Project Title: Proposed care development at land off Shakespeare Way, Lincolnshire, PE11 1GU
Drawing Title: Proposed Site Plan
Status: STAGE 2
Date: 26.02.2026

Size:

Scale:

1 : 500

Project No. 0481
Drawing No. 002
Rev. 2A Series:

10

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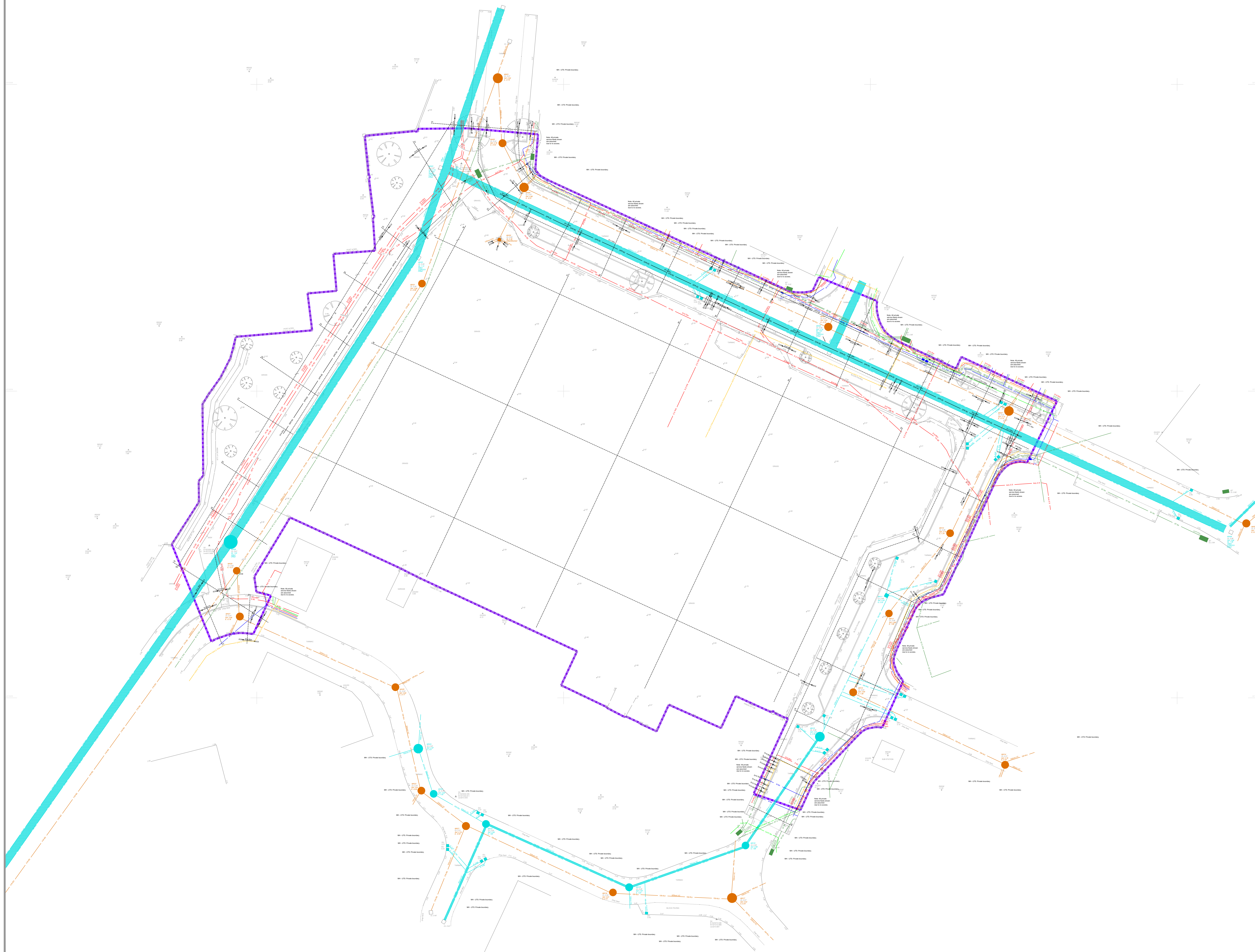


26.02.2026 2A
Date Rev

Draft For Comment
Comment

Appendix B – Topographical Survey

Appendix C – Utilities Survey



360 Mapping Drawing Legend:

Topographical Linetypes:	
	Road
	Drop Kerb
	Slope
	Building Line
	Barrier
	Channel
	Concrete
	Chain Fence
	Metal Fence
	Post & Wire Fence
	Wooden Fence
	Top of Bank
	Bottom of Bank
	Tree Canopy Line
	Verge Line
	Wall
	Footpath
Underground Utility Linetypes:	
	Electric
	Gas
	Water
	Cable TV Taken From Records
	Closed Circuit TV
	British Telecom
	British Telecom Taken From Records
	Empty Ducting
	Unknown Metallic Utility
	GPR Anomaly Possible Utility Communications
	Foul Water Drainage Route
	Surface Water Drainage Route
	Constrained Service Drainage Route
	Unknown Drainage Route
	Field Drain
	Acp Drain
	Assumed Electric Taken From Records
	Assumed Electric
	Electric Overhead
	BT Overhead
	Multi Service Route
	Multi Service Trench
	Water Taken from Records
	Assumed Water
	Assumed Gas
	Gas Taken from Records
	Survey Extents
	Suff Level
	Suff Level
	Unable to Survey
	Unable to Raise
	Unable to Trace
	Unable to Make Out Chamber Attendant

Symbol

Icon	Label	Icon	Label
	Telegraph Pole		Gate
	Lamp Post		Manhole
	Electric Post		Inspection Chamber
	Traffic Light		Stop Valve
	Floodlight		Cable TV Chamber
	Cable TV IC		BT Chamber
	Stop Cook		Road Gully
	Gas Valve		Stop Valve
	Boiloff		Water Meter
	Spot Level		Air Valve
	Post		Wash Out
	Gully		Fire Hydrant
	Earth Road		Gas Valve
	Gas Riser		Cabinet
	Rain Water Pipe		Electric Link Box
	Road Sign		Circular Manhole
	Soil Vent Pipe		Transfuser Manhole
	Reinforcing Eye		Tree

The diagram illustrates the process of a new drug application (NDA) submission and the role of the Center for Drug Evaluation and Research (CDER). It is divided into two main sections: **Pre-clinical** and **Clinical**.

Pre-clinical: This section includes a box for **IND Application** (Investigational New Drug Application) and a box for **IND Approval**. The **IND Application** box contains the text: "The sponsor must submit an IND application to CDER before testing a new drug in humans. The application must include information about the drug's safety, efficacy, and quality." The **IND Approval** box contains the text: "CDER reviews the IND application and, if approved, allows the sponsor to begin testing the drug in humans." A flow arrow points from the **IND Application** box to the **IND Approval** box.

Clinical: This section includes a box for **Phase I Clinical Trial** and a box for **Phase II Clinical Trial**. The **Phase I Clinical Trial** box contains the text: "Phase I clinical trials are the first in humans. They are designed to evaluate the drug's safety, toxicity, and pharmacokinetics." The **Phase II Clinical Trial** box contains the text: "Phase II clinical trials are designed to evaluate the drug's efficacy and safety in a larger group of people." A flow arrow points from the **Phase I Clinical Trial** box to the **Phase II Clinical Trial** box.

CDER: The Center for Drug Evaluation and Research is shown as a central entity. It is represented by a box with the text: "CDER is responsible for reviewing and approving new drugs. It also monitors the safety of drugs on the market." Arrows point from the **IND Application** box and the **Phase I Clinical Trial** box to the **CDER** box.

Flowchart: A flowchart at the bottom shows the sequence of events: **IND Application** → **IND Approval** → **Phase I Clinical Trial** → **Phase II Clinical Trial**. Arrows indicate the flow from left to right.



CLIENT	SHAKESPEARE WAY, HOLLAND PARK SPALDING PE11 1GU
PROJECT TITLE	

UNDERGROUND UTILITIES SURVEY

DRAWING TITLE		
1:200 @ A0	15.09.25	(01/01)
SCALE AT A0	SURVEY DATE	SHEET NO.
JB / SF	SF	SF
SURVEYED BY	DRAWN BY	APPROVED
5102-[30]01		OSTN15
PROJECT OR DRAWING NO.		COORDINATE

PO1	INITIAL RELEASE	SF	18.09.20
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