

Technical Note

Highways and Transport Note

3 Station Road, Flitwick

Project Number: 24238
Doc Number: TN01
Prepared for: Flitwick Town Council

2 July 2024

Rev	Issue Purpose	Author	Reviewed	Approved	Date
A	Draft	HA	HA	AS	01/07/2024
B	Updates	HA	HA	AS	02/07/2024

1. Introduction

- 1.1.1 This Technical Note (TN) has been prepared by Markides Associates (MA) on behalf of Flitwick Town Council with respect to the proposals at 3 Station Road in Flitwick.
- 1.1.2 The site has recently been granted a lawful development certificate to alter the operation of the site from a bank to a restaurant and shop / Post Office (Application Reference: CB/24/01388/LDCP).
- 1.1.3 This TN has been produced in support of a separate planning application for external works to the site, to support the planned use. It considers the relevant highways matters relating to the change of operations, including parking and servicing.

2. Existing Site Context

- 2.1.1 The site is located in Flitwick Town Centre, bound to the north by Kings Road and to the south by Station Road. An existing commercial facility bounds the site to the east with the town square located to the west. The site is shown in a local context below in **Figure 2.1**.

Figure 2.1 **Site Location**



Source: Google Earth

- 2.1.2 The site currently comprises of a former Barclays bank, which is now vacant. The granting of the certificate of lawful development now allows the site to be utilised as a restaurant and shop / Post Office facility.
- 2.1.3 The site benefits from vehicle access from Station Road, leading to a dedicated car parking area which was previously used as part of the sites use as a bank. This access is characterised by a dropped kerb, with a lockable gated facility provided on entry to the site to allow for secure parking to take place. As a result of the arrangement of the gate, access to the car park is provided for cars only.
- 2.1.4 The existing gated access is shown in **Figure 2.2** below.

Figure 2.2 Existing Vehicle Access



Source: Google Maps

- 2.1.5 No delineated parking spaces were provided as part of the bank, with staff parking informally within the parking area. On assessment of historic imagery shown on Google Maps, it appears that the car park has historically accommodated in the region of 5 vehicles, whilst still enabling vehicles to manoeuvre within the car park itself.
- 2.1.6 Pedestrian access to the building is taken from the adjacent square via both a stepped and ramped access. A dedicated pedestrian access is also provided to the north of the building, leading directly into the rear car parking area. This access is stepped and is shown in **Figure 2.3** below.

Figure 2.3 Existing Car Park Pedestrian Access



Source: Google Maps

- 2.1.7 With respect to the site surroundings, it is noted that the square situated to the west of the site has been recently installed, clearing the previous vegetation in this area, to provide an area of open space for the town. In conjunction with the refurbishment of the square, a raised table feature has been installed on Kings Road, to the north of the site, with an associated dropped kerb, tactile paving crossing to facilitate greater ease of movement for pedestrians.
- 2.1.8 The site is characterised by its town centre location, with footways being provided on all of the nearby roads, measuring in the region of 2.0m in width, ensuring connectivity with the surrounding land uses and residential suburbs.
- 2.1.9 The site also lies approximately 350m from Flitwick Railway Station, which provides the town with access to wider areas including Bedford, Brighton and Three Bridges.
- 2.1.10 Bus services are accessible from several bus stops within the site vicinity, on Station Road, the A5120 High Street and from Flitwick Railway Station, with up to 4 services an hour during peak times. Local bus services provide connections to several locations including (but not limited to) Milton Keynes, Bedford and Dunstable.
- 2.1.11 Kings Road and Station Road form predominantly residential roads, subject to 30mph speed limits and measuring in the region of 6.5m, accommodating two-way movements.
- 2.1.12 Station Road is provided with double yellow line parking restrictions. However, it also benefits from dedicated on-street parking bays within the site vicinity. These parking bays are provided for short stay parking needs, accommodating a 30-minute duration between the hours of 08:00 and 18:00, Monday to Saturday. Outside of these times, these restrictions do not apply enabling longer term parking as required.

- 2.1.13 Kings Road is subject to single yellow line restrictions, prohibiting parking during part of the day (08:00-12:45 and 13:15-18:00), Monday to Friday.
- 2.1.14 In light of the above, it is considered that the site benefits from being sustainably located within the town centre of Flitwick, enabling wider residents of Flitwick to access the site via active and sustainable transport means.

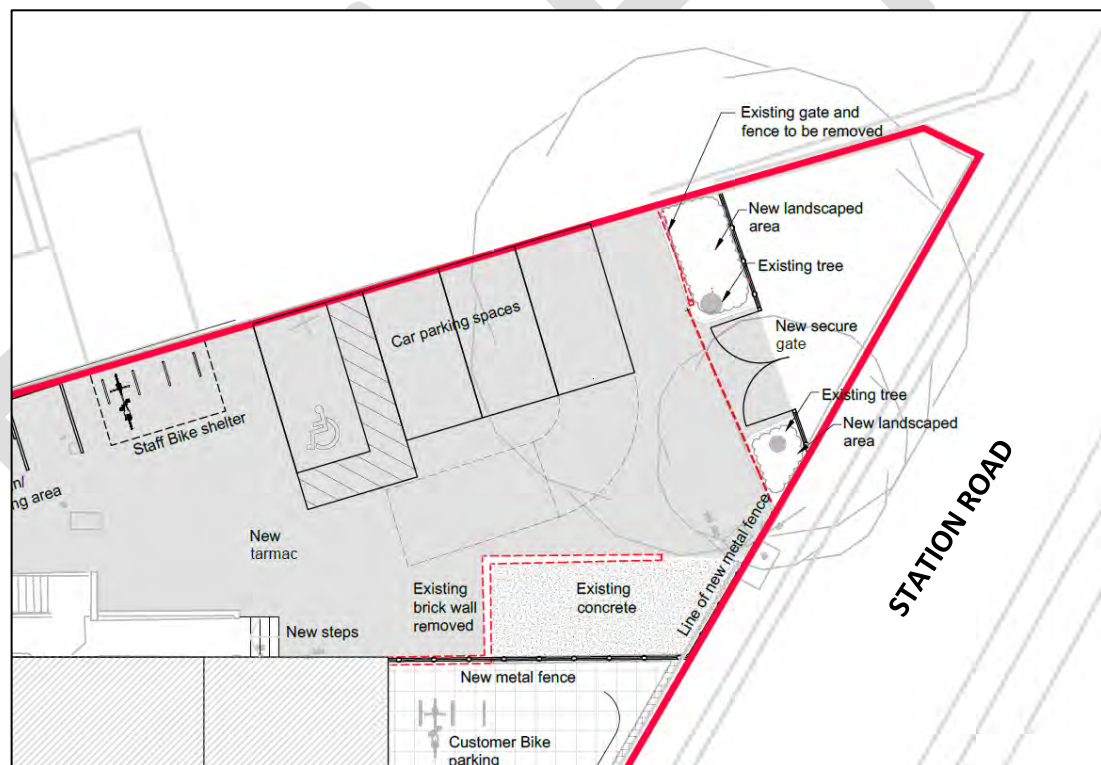
3. Transport Considerations

- 3.1.1 This section details the relevant transport matters related to the external works proposed to support the restaurant and shop / Post Office. A plan of the proposed external works is included at **Appendix A** for completeness.

3.2 Access

- 3.2.1 Vehicle access to the site will be retained from Station Road, however, to enable greater ease of access to the parking area, the existing gate will be relocated, as shown in **Figure 3.1** below.

Figure 3.1 Relocated Vehicle Access Gate



Source: Drawing Number X2301-DD-XX-00-DR-A-00 002 S8 P0

- 3.2.2 As a result of the relocated gate arrangement, the existing dropped kerb arrangement is proposed to be elongated to accommodate the swept paths of cars accessing the site. Swept path analysis for the new access arrangement is provided in **Appendix B** to demonstrate the suitability of the proposed arrangement.

- 3.2.3 In addition, based on the swept path analysis provided, the plan at **Appendix C** demonstrates the additional length of dropped kerb that would be applied for. This indicates an approximate additional length of 2.5m. Based on the positioning of the on-street parking bays in this location, it is not considered that the additional dropped kerb length will impact the parking bays and as such, no changes are proposed to this on-street arrangement.
- 3.2.4 It is envisaged that the additional length of dropped kerb would be provided through Central Bedfordshire's dropped kerb application process. However, confirmation of this deliverability mechanism would be appreciated.
- 3.2.5 The new gate will measure approximately 3.0m in width, accommodating car access to the parking area, in line with the current arrangement.
- 3.2.6 Pedestrian access to the building from the adjacent square will be retained in its current location, with a new ramp and steps provided. The stepped pedestrian access to the north of the building, providing access to the car parking area, will also be retained.
- 3.2.7 A new gate will be installed onto Kings Road. This will be used to facilitate refuse collection for the site as well as acting as an additional pedestrian / cycle access to the rear of the site. The site servicing arrangement will be discussed later in this TN. The gated access has been provided with a 2.0m width and will be lockable.

3.3 Vehicle Parking

- 3.3.1 To support the restaurant and shop / Post Office, the existing car park to the west of the building is to be retained, with delineated parking spaces proposed. A total of four parking spaces will be provided, of which one will be a dedicated disabled bay.
- 3.3.2 The onsite parking is to be utilised by staff only, with the onsite disabled space being used flexibly for staff and visitors to the site as required. It is noted that the arrangement of the onsite parking allows for future conversion of an additional space, should further disabled parking provision be required.
- 3.3.3 With respect to the level of on-site parking, Central Bedfordshire's guidance regarding vehicle parking for retail / restaurant uses is as follows:
- **Class E(a)(i)** – display or retail sale of goods, other than hot food, supermarkets or food retail – 1 space per 20sqm (first 1,000sqm).
 - **Class E(b)** – sale of food or drink for consumption (mostly) on the premises – 1 space per 25sqm.
- 3.3.4 Based on a floor area of 84sqm for the retail element of the site and a floor area of 330sqm for the proposed restaurant, this results in the provision of up to 17 spaces for the site as a whole.
- 3.3.5 With respect to the proposed parking, it should firstly be noted that the site has been granted a certificate of lawful development. As such, the former bank will now be utilised as a

restaurant and shop / Post Office which has been considered acceptable in planning terms. By virtue of this, it is considered that the onsite parking arrangement is acceptable.

- 3.3.6 Additionally, as a result of the town centre location of the site, it is envisaged that customers of the restaurant and shop / Post Office will be able to access the site via active and sustainable transport means, without the need for private vehicle use.
- 3.3.7 However, for those that wish to travel to the site via car, it is noted that short stay parking is available on Station Road during the day, accommodating the short-term needs of those visiting the shop / Post Office. During the evening period, the short stay restrictions end, allowing visitors of the restaurant to utilise this parking during this time.
- 3.3.8 For wider long stay parking needs, it is noted that several public car parks are available within a short walk of the site, as shown in **Figure 3.2** below. The associated car park information is provided in **Table 3.1** also.

Figure 3.2 Local Public Car Parks



Source: OpenStreetMap

Table 3.1 Local Public Car Parking Facilities

Car Park	Name	Walk Distance	Walk Time (mins)	Capacity	Length of Stay
1	NCP Flitwick Station Road	100m	1	55	Long Stay
2	Steppingley Road Car Park	400m	5	285	Long Stay
	Thameslink Flitwick Station Car Park	300m	4	194	Long Stay

- 3.3.9 As shown above, there are a number of public car parks within the near vicinity of the site, capable of accommodating the long-term parking needs of visitors to the site throughout the day.
- 3.3.10 In light of the above, it is considered that the onsite parking provision is suitable to accommodate the needs of the site, with no opportunity for overspill.
- 3.3.11 The single disabled parking space is seen to align with Central Bedfordshire's guidance for disabled parking, which for car parks with 1-15 spaces is one dedicated space.
- 3.3.12 The standard onsite parking has been shown with dimensions of 2.5m by 5.0m, with an additional 1.2m width and length provided for the dedicated disabled bay.
- 3.3.13 'Active' Electric Vehicle (EV) charging facilities will be provided for the disabled parking space and adjacent standard parking space, with two chargers proposed.
- 3.3.14 To facilitate ease of access for the proposed parking arrangement, the existing wall to the south of the building will be demolished, with the resulting space given over to the car parking arrangement to offer greater accessibility for vehicles. The existing fencing around the car parking area will be retained, ensuring the car park is secure.
- 3.3.15 Swept path analysis for a car is provided in **Appendix B**, to demonstrate the suitability of the proposed car parking area and revised access arrangement.

3.4 Cycle Parking

- 3.4.1 Central Bedfordshire outline the following short and long stay cycle parking requirements for restaurant and shop uses:
- **Class E(a)(i)** – display or retail sale of goods, other than hot food, supermarkets or food retail
 - Long Stay – less than 200sqm = 1 space per 100sqm
 - Short Stay – less than 200sqm = 1 space per 100sqm

- **Class E(b)** – sale of food or drink for consumption (mostly) on the premises
 - Long Stay – 1 per 10 staff
 - Short Stay – 4 per visitor entrance

3.4.2 Whilst staff numbers are not currently known, utilising the employment density guide¹ for restaurants / cafes, it indicates one member of staff per 15-20sqm. Taking this figure and the areas detailed above, this would allow of up to 22 staff to be employed on a full / part time basis. Based on this the following cycle parking would be required:

- **Shop**
 - Long Stay – 1 space
 - Short Stay – 1 space
- **Restaurant**
 - Long Stay – 2 spaces
 - Short Stay – 4 spaces

3.4.3 For the site, a total of 16 long stay cycle parking spaces are proposed comprising of 8 covered Sheffield stands, located within 2 shelters in the rear car parking area. A further 12 short stay cycle parking spaces are proposed to the north and south for the building equating to 6 Sheffield stands.

3.4.4 Based on the standards detailed above, it is considered that the onsite cycle parking proposed exceeds the minimum cycle parking requirements outlined.

3.5 Site Servicing

3.5.1 As a result of the site layout, large deliveries to the restaurant and shop / Post Office will take place on-street, within the vicinity of the vehicle entrance on Station Road. No loading restrictions are present and as such this arrangement is considered feasible and in-keeping with the delivery arrangements for the bank, which would have also operated with on-street deliveries.

3.5.2 It is understood that for the Post Office, postal delivery vans are likely to service the site, for postal collection purposes. It is envisaged that this will take place from Kings Road, given the location of the Post Office. Vehicles will dwell for only a short period of time, for loading purposes only, which is seen to be suitable in the context of the parking restrictions in this area (which do not prohibit loading).

¹ Please see: https://www.kirklees.gov.uk/beta/planning-policy/pdf/examination/national-evidence/NE48_employment_density_guide_3rd_edition.pdf

- 3.5.3 Deliveries for the proposals will be managed to avoid the network peak periods and will be supervised by staff to ensure highway amenity is maintained.
- 3.5.4 Given the location of the vehicle access to the site, adjacent to an existing commercial facility and opposite an NCP car park, it is noted that deliveries in this location will have no impact on surrounding residential amenity.
- 3.5.5 With respect to refuse collection, refuse stores are indicated to the north of the building and within the vicinity of the on-site car parking arrangement, accommodating both waste and recycling needs. As detailed above, a new gate is proposed onto Kings Road to allow the bins to be brought to the highway for collection purposes. It is envisaged that private commercial refuse collection will take place for the site, ensuring the proposed storage locations are suitable for collection needs.
- 3.5.6 In light of the above, it is not considered that the proposed site servicing strategy will impact highway safety or amenity.

4. Conclusion

- 4.1.1 This Technical Note (TN) has been prepared by Markides Associates (MA) on behalf of Flitwick Town Council with respect to the proposals at 3 Station Road in Flitwick. The site benefits from a lawful development certificate for the change in operations at the site from a bank to a restaurant and shop / Post Office (Application Reference: CB/24/01388/LDCP). This TN supports the external works proposed as part of the restaurant and shop / Post Office.
- 4.1.2 Based on the evidence presented, it is clear that the site is sustainably located within Flitwick town centre, with ease of access to active and sustainable transport modes.
- 4.1.3 As part of the proposals, the existing access on to Station Road will be retained, with the existing gate relocated to support the proposed car parking arrangement. The dropped kerb arrangement will be elongated in support of this arrangement to ensure suitability. The onsite vehicle parking is seen to be suitable for the needs of the site, in light of the site's location and access to wider public car parks. Cycle parking accords with Central Bedfordshire's guidance. With respect to site servicing, it is considered that on-street deliveries can be managed appropriately to ensure highway amenity is maintained. Refuse collection will take place from Kings Road, with stores appropriately located to facilitate this.
- 4.1.4 In light of the above, it is not considered that the external works proposed in support of the restaurant and shop / Post Office will have any impact on highway safety nor result in any 'severe' highway impacts. As such, it is considered that there can be no sound, transport-based objections to the proposals.

APPENDIX A – SITE LAYOUT PLAN

DRAFT

APPENDIX B – SWEEP PATH ANALYSIS

DRAFT

APPENDIX C– ADDITIONAL DROPPED KERB AREA

DRAFT

Survey Notes

Grid: Local Plane Metric related to National at AD2.

Levels: OS Datum from GNSS positioning, converted using the National Geoid Model OSGM15.

Notes



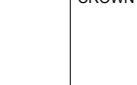
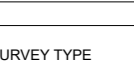
Survey Legend

[illegible]

INSPECTION CHAMBERS		OVERHEAD FIXTURES
Inspection Cover	<input type="checkbox"/> IC	Electricity Pylon
Inspection Cover (Data)	<input type="checkbox"/> IC/TL	Electricity
Mantle	<input type="checkbox"/> MH	Telephone
Infrared Telesens Cover	<input type="checkbox"/> RT	
Inspection Cover (Cinema)	<input type="checkbox"/> IC/COM	
Cable TV	<input type="checkbox"/> CTV	
Inspection Cover Traffic Signals	<input type="checkbox"/> IC/TL	
Drip	<input type="checkbox"/> G	
Kerb Outlet	<input type="checkbox"/> KO	
LEVEL AND HEIGHT INFORMATION		
Coast Level		+ 0.26.49
Invert Level		+ 0.25.15
Reducing Step Level		+ 0.24.14
Bump Level		+ 0.24.22.15

UNDERGROUND SERVICES KEY

[illegible]

TYPICAL FEATURE DEPTH ANNOTATION		
ELECTRO-MAGNETIC DETECTION	VISUAL ORALN (VISUAL OBSERVATION)	GROUND PENETRATING RADAR
 APPROX. DEPTH TO CENTER	 APPROX. DEPTH TO BORDER	 APPROX. DEPTH TO GROUND SURFACE
 CABLE/FIBER		
BSI PAS 55:2012 QUALITY LEVEL INFORMATION		
SURVEY TYPE	QUALITY LEVEL	DESCRIPTION
B	Q-4.7E	Location not detected on site but from bore records.
	Q-4.8E	A site inspection was not been conducted but is suspected to exist. Devices assumed acute survey only.
	Q-3	Horizontal evidence to support geophysical techniques only. Devices only visible on surface and visible again in profile.
	Q-2	Horizontal and vertical evidence to support geophysical techniques only. Horizontal evidence from trenching to surface. Median cable/fiber line in position and depth.
	Q-1	Horizontal and vertical evidence to support geophysical techniques. Horizontal evidence from trenching to surface. Median cable/fiber line in position and depth.
A	Q-4	Horizontal and vertical location of the utility established by the use of ground penetrating radar. Evidence to support the use of targeted excavations (concrete excavation and steel).
	Q-3	Horizontal and vertical location of the utility established by the use of GPR and ground penetrating radar. Evidence to support the use of targeted excavations (concrete excavation and steel).
OTHER ANNOTATIONS (P)		
<p>Figure annotation (P) is used to denote a feature that has been detected through the use of GPR and ground penetrating radar.</p> <p>Figure annotation (P) is used to denote a feature that has been detected through the use of GPR and ground penetrating radar.</p>		

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Accreditations

RICS

**THE SURVEY
ASSOCIATION**

ICES

CHARTERED

**THE
INSTITUTION
OF
ENGINEERS**

ISO 9001

Client

Luton Borough Council
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Project

3 Station Road
Flitwick
Bedfordshire MK45 1JS

Utility Mapping Survey

Surveyed by CHB	Drawn by CHB	Survey Date May 2024
Checked by DJ	Approved by DJ	Scale A0@1:100

Drawing No	61744/UG	Revision
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PEARCE

Arboricultural Consultants

Report No: PAC.PAA.01.00

Date: 11/06/2024

Project: 3 Station Road, Flitwick, Bedfordshire, MK45 1JS1

BS 5837:2012

Preliminary Arboricultural Assessment



Inspection Record.

Date of Inspection	Surveyor
010/06/2024	Russell Pearce BSc (Hons) Arboriculture

Revision	Date	Prepared by	Status
Initial	11/062024	R. Pearce	Complete



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Appendix Two

Tree Schedule

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Tree Constraints Plan

1.0 Introduction

- 1.0.1 PEARCE Arboricultural Consultants received instruction in June 2024 from Mr David Mitton to attend a site inclusive of and adjacent to 3 Station Road, Flitwick, Bedfordshire, MK45 1JS to undertake an arboricultural survey to BS5837:2012 guidance to assess any trees, hedges and major shrub groups growing on and within influencing distance of the site and to produce a Schedule of trees, Tree Constraints Plan, Preliminary Arboricultural Assessment Report and to potentially inform an Arboricultural Impact Assessment, Arboricultural Method Statement and Tree Protection Plan.
- 1.0.2 The author of this report is Russell Pearce BSc who graduated from UCLan in 2014 with a BSc (Hons) Arboriculture degree and has 10 years' experience within the arboriculture industry. He has experience working in the public and private sectors, having previously worked for Kent County Council, Medway Unitary Council and reputable consultancy firms. He is LANTRA certified in Professional Tree Inspection and has various NPTC qualifications. He also has experience carrying out CAVAT valuation surveys, and TEMPO assessments in relation to the statutory protection of trees.
- 1.0.3 Russell Pearce undertook the tree survey on the 10th of June 2024 for PEARCE Arboricultural Consultants and this report represents a summary of the findings.
- 1.0.4 Any information and advice provided below or appended is underwritten by our Professional Indemnity Insurance for the business practice of Arboricultural Consultancy to the value of £5m for any potential claim.
- 1.0.5 Table 1: **Documents referred to:**

Document	Reference No.
Survey base drawing	61744/TOP1/1
LPA pre-app comments	N/A
British Standard 5837:2012	"BS5837"
Tree Survey Schedule	PAC.TS.01.00 (Appendix 2)
Tree Constraints Plan	PAC.TCP.01.00 (Appendix 3)

- 1.0.6 **Limitations of the report:** A PAA in isolation is not intended to be sufficient to support a full planning application although it will be sufficient to support an outline application. Once detailed plans are made available, an Arboricultural Impact Assessment (AIA) must be carried out, which can then be submitted to the Local Authority to support the planning application.

2.0 Tree Survey

- 2.0.1 **Scope:** Pre-development tree survey make arboricultural management recommendations based exclusively upon the individual tree or group of trees condition relative to their present context (i.e. not in relation to the proposed development).
- 2.0.2 An arboricultural survey pertaining to guidance provided in 'BS5837:2012 Trees in relation to design, demolition and construction – Recommendations' was undertaken by Mr Russell Pearce on 11th June 2024.
- 2.0.3 During the survey the trees were categorised according to 'Table 1 – Cascade chart for tree quality assessment' of BS5837:2012 (see appendix 1).
- 2.0.4 A total of 3 (three) individual trees were surveyed. Details for each of the trees surveyed are provided in the Tree Schedule (see Appendix 2).
- 2.0.5 Table 1: **Documents upon which this tree survey has been based.**

Document	Originator	Reference Number	Title
Topographical Survey	Malcolm Hughes Chartered Land Surveyors	61744/TOP1/1	Topographical Survey

2.0.6 **Limitations of the Survey:**

- The report is based upon a visual inspection. The consultant shall not be responsible for events that happen after the date of the report due to factors that were not apparent at the time, and the acceptance of this report constitutes an agreement with the guidelines and the terms listed in this report.
- The consultant accepts no liability in respect of the trees unless any recommendations of this report are carried out under his supervision.
- Assessing the potential influence of trees upon load bearing soils, beneath existing and proposed structures resulting from water abstraction by trees or rehydration of shrinkable soils was not included in the contract brief and is therefore not considered in the report. The consultant cannot be held responsible for damage arising from such action.
- Trees are living organisms whose health, condition and structure can change over time. The contents of this report are valid for a period of one year from the date of the report.
- Potentially hazardous trees are highlighted, and appropriate recommendations are made. However, this report should not be seen as a substitute for a full tree risk assessment or management plan which are specifically designed to minimise risk and liability associated with responsibility for trees.

2.0.7 Legal Status: No statutory protection check has been performed. BS5837 does not draw any distinction between trees subject to statutory protection, such as a Tree Preservation Order (“TPO”), and those trees without. This is principally because a detailed planning consent overrides any TPO protection. Consequently, we do not seek to offer any comparison between or infer any difference in the quality or importance of TPO trees and other trees.

2.0.8 Site Description: The site is in Flitwick – a town and civil parish in Central Bedfordshire & consists of the now derelict Barclays Bank building and associated surrounding hard landscaping. The site is flat, roughly triangular in shape located just to the east of the centre of Flitwick bounded by Station Road and the Railway Line to the south and Kings Road to the north. There are 3 trees on site located in planting areas to the south of the site.



Figure 1: OS Map (Bing Maps) showing site location



Figure 2: Aerial Image of Site (Google Earth) illustrating site boundary

3.0 BS5837: 2012 Scope & Methodology

- 3.0.1 Weather conditions during the survey were dry and still. This standard recognises that there can be problems for development close to existing trees which are to be retained, and of planting trees close to existing structures. This standard sets out to assist those concerned with trees in relation to construction to form balanced judgements. It does not set out to put arguments for or against development, or for the removal or retention of trees. Where development, including demolition, is to occur, the standard provides guidance on how to decide which trees are appropriate for retention, on the means of protecting these trees during development, including demolition and construction work, and on the means of incorporating trees into the developed landscape.
- 3.0.2 The methodology used to assess the trees was the British Standard 5837:2012 'Trees in Relation to Construction' tree survey method. The aim of the survey is to establish which trees are moderate and good quality; suitable for retention and justifying protection. And, which trees are low or poor quality; either undesirable or unsuitable to retain and protect.
- 3.0.3 The tree survey includes all trees included in the land survey red line boundary plan, as well as any that may have been missed, and it should categorize trees or groups of trees, including woodlands for their quality and value within the existing context, in a transparent, understandable and systematic way. Where the arboriculturist has deemed it appropriate, the trees have been tagged with small metal or plastic tags, placed as high as is convenient on the stem of each tree.
- 3.0.4 Whilst master plan proposals for the development of the site might be available, the trees have been surveyed without taking these into consideration. All detailed design work on site layout should take into consideration the results of the tree survey (and the TCP – see appendix 3).
- 3.0.5 Trees forming groups and areas of woodland (including orchards, wood pasture and historic parkland) are identified and considered as groups where the arboriculturist has determined that this is appropriate, particularly where they contain a variety of species and age classes that could aid long-term management. It is often expedient to assess the quality and value of such groups of trees as a whole, rather than as individuals. However, an assessment of individuals within any group has been undertaken if they are open-grown or if there is a need to differentiate between them.
- 3.0.6 The quality and value of each tree or group of trees has been recorded by allocating it to one of the four categories: **A**, **B**, **C**, or **U** (highest to lowest quality respectively). The categories are differentiated on the tree survey plan by colour, or by suffixing the category adjacent to the tree identification number on the TCP.
- 3.0.7 The survey schedule lists all the trees or groups of trees. The following information is also provided:
- Sequential reference number (to be recorded on the tree survey plan);
 - Species (common and/or taxonomic names);
 - Height in meters (m);
 - Trunk diameter in millimetres (mm) at 1.5 m above adjacent ground level or immediately above the root flare for multi-stemmed trees;

- Crown (branches) spread in meters taken at the four cardinal and/or intercardinal compass points;
- Height of crown clearance above adjacent ground level in meters (m);
- Age class
- Physiological condition
- Structural condition
- Comments/description of features
- Estimated remaining contribution
- Retention Category as described by application of the BS5837:2012 **Cascade Chart for Tree Quality Assessment (Appendix 1)**

4.0 Potential Arboricultural Impacts

- 4.0.1 The RPA is an area of ground around the base of a tree indicated on the Tree Constraints Plan as a circle centred around the stem which is calculated in relation to the stem diameter.
- 4.0.2 The majority of tree roots grow within the upper 600mm of the soil profile where most nutrients are available as the result of the decomposition of organic matter close to the surface. Rooting conditions become less favourable at depth as the soil density increases, creating anaerobic conditions.
- 4.0.3 It is essential that roots are protected from construction works including physical damage from excavation and changes in soil structure from compaction and changes in ground levels.
- 4.0.4 BS 5837:2012 states that the default position for proposed structures should always be outside the RPA. It is recognised that this may not always be possible, yet tree retention would be desirable. In this instance, technical solutions might be available that prevent damage to the retained tree(s).

5.0 Constraints & Opportunities

- 5.0.1 Where possible, category A and B trees should be retained and any works within their RPAs should be undertaken in a sympathetic manner. Although C category trees should not be a constraint to development, it may be desirable to retain them as part of the wider landscape proposals.

6.0 Discussion and Tree Removals

- 6.0.1 Due to the condition of **T2** and its designation as a category **U** I would recommend its removal to alleviate the risk of harm – as a result **T2** should not be regarded as a constraint on development.

6.0.2 **T1** appears to be a such a distance from any potential demolition or construction that no works would be required – however dependant on any potential proposal tree protection measures may be required prior to any works taking place.

6.0.3 **T3** appears to have numerous potential constraints on development:

- Low crown which may restrict vehicular access.
- RPA extends into the site and any changes such as excavation or construction within the RPA has the potential to damage roots – supervised hand digs or no dig methods could be utilised as a means of root protection.
- The stem is located within a mound of earth that would need to be retained due to the likely proliferation of roots within.
- Before any works on site commence tree protection measures will need to be in place.



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Appendix One

Cascade Chart

Trees for removal				
Category and definition		Criteria		
Category U Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years		<ul style="list-style-type: none">○ Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other U Category trees (i.e. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning)○ Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline.○ Trees infected with pathogens of significance to the health and/or safety of other trees nearby) e.g. Dutch elm disease), or very low-quality trees suppressing adjacent trees of better quality. <p>NOTE: <i>Category U trees can have existing or potential conservation value which might be desirable to preserve; see section 4.7.5</i></p>		
Trees to be considered for retention				
Category and definition		Criteria and sub-categories		
		1) Mainly arboricultural values	2) Mainly landscape values	3) Mainly cultural values (including conservation)
Category A Trees of high quality: with an estimated remaining life expectancy of at least 40 years		Trees that are particularly good examples of their species especially if rare or unusual, or essential components of groups, or of formal or semi-formal arboricultural features (e.g. the dominant and/or principal trees within an avenue)	Trees, groups or woodlands of particular visual importance as arboricultural and or landscape features	Trees, groups or woodlands of significant conservation, historical commemorative or other value (e.g. veteran trees or wood-pastures)
Category B Those of moderate quality: with an estimated remaining life expectancy of at least 20 years		Trees that might be included in category A, but are downgraded because of impaired condition (e.g. presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention for beyond 40 years; or trees lacking the special quality necessary to merit the category A designation	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider area	Trees with clearly identifiable conservation or other cultural benefits
Category C Those of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm		Unremarkable trees of very limited merit or such impaired condition that they do not qualify in the higher categories	Trees present in groups or woodlands, but without this conferring on them significantly greater landscape value, and/or trees offering low or only temporary screening benefit.	Trees with no material conservation or other cultural value



PEARCE

Arboricultural Consultants

Appendix Two

Tree Schedule



Tree Survey Schedule

3 Station Road, Flitwick, Bedfordshire, MK45 1JS

Client Flitwick Town Council

Survey Date 10/06/2024

Weather Conditions Clear and Sunny

Surveyor Russell Pearce

Key:

Tree No.	A unique number or reference to identify trees or groups as shown on associated plans.
Species	Common and/or taxonomic name.
Ht.	The height of the tree in meters (m).
Trunk Diameter	The stem diameter in millimetres (mm) taken at 1.5m above ground level unless otherwise specified.
Crown Spread	The extents of the crown taken, in meters (m), at cardinal points of the compass: North (N); East (E); South (S) and West (W); or intercardinal points: Northeast (NE); Southeast (SE); Southwest (SW); Northwest (NW)
Crown Clear	The height of the crown above the current ground level, in meters (m), taken at cardinal points of the compass: North (N); East (E); South (S) and West (W); or intercardinal points: Northeast (NE); Southeast (SE); Southwest (SW); Northwest (NW)
Age Class	Age classification: Young (Y); Semi-mature (SM); Early Mature (EM); Mature (M); Over Mature (OM).
Phys. Cond.	The general physiological condition of the tree: Good; Moderate; Poor; Moribund; Dead.
Struct. Cond.	The general structural condition of the tree: Good, Moderate, Poor, Hazardous.
Comments	Notes and general comments on the structural condition of the tree, its environment and its estimated remaining contribution.
Est. Rem. Cont.	Estimated remaining contribution (years): <10; 10+; 20+ 40+
Cat.	Retention Category as described in the Cascade Chart for Tree Quality Assessment at Appendix 1 : A, B, C, U (subcategories 1, 2, 3)



Tree No.	Species	Ht. (m)	Trunk Diam. (mm)	Crown Spread (m)				Crown Clear. (m)				Age Class	Phys. Cond.	Struct. Cond	Comments	Est. Rem. Cont. (years)	Cat.
				N	E	S	W	N	E	S	W						
T1	Silver Birch	8	330	4	3	3	4	1	1	1	1	EM	Good	Moderate	Open balanced crown. Recent heavy reduction. Acute primary unions. Located in 2mx2m planting pit - paved beyond with some deflection of pavers. Good aesthetic value.	20+	B1
T2	Robinia	6	370	3	2	4.5	4	1.5	1.5	2	1.5	SM	Moribund	Poor	Longitudinal open basal/stem wound on southeast side of stem - poorly occluded with significant & obvious decay - percussion test indicates underlying wood has significant decay. Heavily cankered beyond primary unions. Stag-headed crown. No SULE (Safe Useful Life Expectancy) with increasing RoH (Risk of Harm) over time.	<10	U



Tree No.	Species	Ht. (m)	Trunk Diam. (mm)	Crown Spread (m)				Crown Clear. (m)				Age Class	Phys. Cond.	Struct. Cond.	Comments	Est. Rem. Cont. (years)	Cat.
				N	E	S	W	N	E	S	W						
T3	Sycamore	15	560	6	7	6	6	2	2	2	2	EM	Good	Good	Open balanced spreading crown. Codominant trifurcation at 2.25m - slender stems distally indicative of historic pollarding - good structural integrity. Minor deadwood within crown. Located in mounding of earth - to be retained. Minor impact wounds on underside of branches overhanging access by gate.	40+	B1

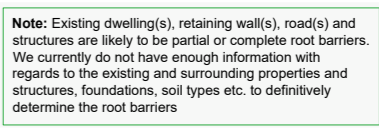
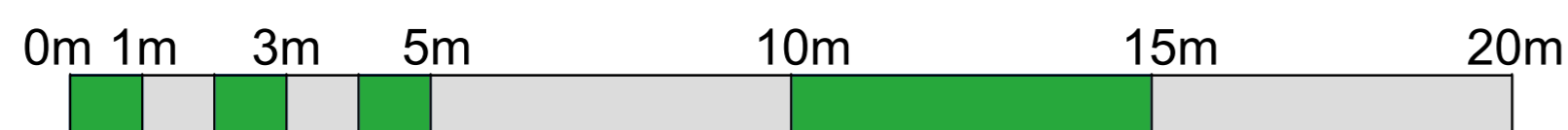


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Arboricultural Consultants

Appendix Three

Tree Constraints Plan



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Project:

2 Station Road

This drawing is not to be read as a definitive part of the engineering or construction design. An architect or structural engineer should be consulted over any matters of construction and for any standards or regulatory requirements relating to proposed structures, hard services.

This drawing was produced in colour - a monochrome copy should not be relied upon.

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STEPS TO RESTAURANT



METAL FENCE



BIKE SHELTER



REFUSE & RECYCLING BIN

DISCLAIMER
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SCALE 1:200

LEGEND

- Site Boundary
- Adjoining Land owned by applicant
- Existing Building

PO	Issued for Planning	AK	02.07.24
REV	DESCRIPTION	BY	DATE
DRAWING STATUS			
PLANNING			
<h1>Luton</h1>			
PLACE AND INFRASTRUCTURE DEPARTMENT PROPERTY & CONSTRUCTION Apex House 30-34 Upper George Street Luton LU1 2RD Tel : 01582 546000 Fax : 01582 546674			
DRAWING TITLE			
PROPOSED SITE PLAN			
PROJECT NAME			
3 STATION ROAD FLITWICK EXTERNAL WORKS			
ADDRESS			
3 STATION ROAD FLITWICK MK45 1JS			
CLIENT			
FLITWICK TOWN COUNCIL			
SCALE	DRAWN BY	DATE	
1:200@A2	AK	05.06.24	
SHEET NO:	CHECKED BY	DATE	
1 OF 1	DM	24.06.24	
DWG NO.	STAT:	REV:	
X2301-DD-XX-00-DR-A-00 002	S8	P0	



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LEGEND

- Site Boundary
- Adjoining Land owned by applicant
- Existing Building

P0	Issued for Planning	AK	02.07.24
REV	DESCRIPTION	BY	DATE
DRAWING STATUS			
PLANNING			

Luton

PLACE AND INFRASTRUCTURE DEPARTMENT
PROPERTY & CONSTRUCTION
Apex House 30-34 Upper George Street Luton LU1 2RD
Tel : 01582 546000 Fax : 01582 546674

DRAWING TITLE
SITE LOCATION PLAN

PROJECT NAME
3 STATION ROAD FLITWICK FEASIBILITY EXTERNAL WORKS

ADDRESS
FORMER BANK
3 STATION ROAD
FLITWICK
MK45 1JS

CLIENT
FLITWICK TOWN COUNCIL

SCALE	DRAWN BY	DATE
As shown@A3	AK	05.06.24

SHEET NO.	CHECKED BY	DATE
1 OF 1	DM	30.06.24

DWG NO.	STAT	REV:
X2301-DD-XX-00-DR-A-70 000	S8	P0





FLITWICK TOWN COUNCIL
3 STATION ROAD FLITWICK – EXTERNAL WORKS
DESIGN AND ACCESS STATEMENT



Flitwick
Town Council

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SECTION 0

CONTENTS

1.0 INTRODUCTION

2.0 SITE CONTEXT AND ENVIRONMENT

3.0 PLANNING

4.0 FAÇADE

5.0 SECURITY AND DISABLED ACCESS

6.0 SERVICING, DELIVERIES, REFUSE AND RECYCLING

7.0 SUSTAINABILITY

REFERENCE X2301-DAS-00-XX-DO-A-90001

STATUS	REVISION	DESCRIPTION	DATE	BY	APPROVED
SO	P1.1	For Information	03.07.24	DM	SW

SECTION 1 INTRODUCTION

1.0 INTRODUCTION

3 Station Road, Flitwick is a freehold commercial property with accommodation over three floors. Originally constructed in the late 1960s - early 1970s, the property was later extended in the 1980s with a single storey side extension. Barclays bank operated the site from the 1970s until early in 2023 when the bank was closed as part of a wider programme of closure by Barclays Bank across its estate.

The site occupies an excellent position within the town centre, in a highly prominent location and is circa 150m from the town's mainline train station. The building appears to be in a good condition having only been vacated relatively recently and fronts a space beyond the town's listed war memorial, which is seen as an important community asset for the town.

In this context the building was purchased by Flitwick Town Council (FTC) in 2021. The council intends to maintain the freehold interest and lease out the building as one or more units to individual tenants.

Barclays Bank have now vacated the building and it is FTC's intention is to have the project "oven ready" for development work to start as soon as possible.

"The Original Aim remains our priority – to secure and protect the square as a public space for future generations and to develop the square as a community space that can be used for a variety of purposes from specialist markets to entertainment events."

Flitwick Town Council 2021

SECTION 1 INTRODUCTION

1.2 OVERVIEW

The project's overall goal is to transform the site into an attractive building that is commercially successful, vibrant and maximises rentable income for the Town Council.

Proposals must contribute to the vibrancy and attractiveness of the town centre and seek to draw people in from the wider area, contributing to the local economy and supporting local employment.

The original building, while attractive, is generally in need of cleaning and refurbishment and the fabric brought up to modern standard in terms of thermal insulation

This application is for Landlord works to enable a new retail tenant and separate restaurant tenant to occupy the proposed units

The Landlord works are to prepare the existing for new tenant & their fit-out works.

The Landlord works propose to remove the existing ground and first floor windows to both units, install new windows, new shopfronts and doors . All internal partitions, soffits & floor finishes will be stripped out in readiness for the new tenant's layout & finishes.

The ground & first floors rear means of escape stairs, as well as some back of house accommodation will be retained, with no change to the final exit at the rear into the parking area

The existing final rear exit doors will be retained. The door between the ground floor back of house area & the front of house accommodation will also be retained to maintain the units fire compartmentation integrity.

The level difference from the public realm to the finished floor level within the unit at the entrance will be via a new external ramp formed ramp compliant with Approved Document K gradient.

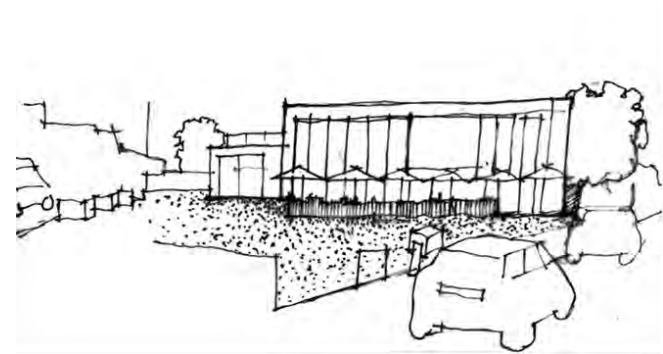
At first floor level all WC accommodation partitions & fittings will be removed, all services to be stripped out & will be capped off.

SECTION 1 INTRODUCTION

1.3 PURPOSE OF THIS DESIGN AND ACCESS STATEMENT

This planning application is regarding external works that are required to bring the building to a standard where it can be marketed to potential tenants. This allows the applicant to ensure that any planning permission achieved will be in the best interests of the town, balancing the commercial and community needs, retaining the character, reputation and values of Flitwick

A Certificate of Lawfulness has been issued by Bedfordshire district council confirming the planning use class .



Development Sketch

SECTION 2

SITE, CONTEXT AND ENVIRONMENT

2.1 THE LOCATION

Flitwick is a small town in rural Bedfordshire which has seen significant development in recent years partly due to its excellent rail links to London. Surrounded by beautiful countryside, the town has excellent leisure amenities and a vibrant community spirit. - **Flitwick Town Council Website**

2.2 THE SITE

The site, centrally located within the town, is within short walking distance of the mainline railway station and High Street. The town has excellent transport links and is served by the M1 to the West and A6 to the East.

The building sits on a triangular area of land including “Flitwick Town Square” in front of the bank. Station Road lies to the south and Kings Road to the north. East of the site boundary is a car sales showroom and to the south beyond Station Road runs the railway line. On the north to the other side of Kings Road are retail and commercial uses.

Flitwick Town Square is an important part of the town and will host Memorial Ceremonies, Markets and entertainment activities for the benefit of the town



The Town Square is already in use as a market venue

SECTION 2

SITE, CONTEXT AND ENVIRONMENT

2.3 FLITWICK TOWN SQUARE

Substantial investment has recently been made on the Town Square.

Completed in April 2020 the project consisted of clearance of the site, resurfacing of the existing square, new kerbs, stone paving, signage and street furniture.

The current use includes for general and specialist markets, erection of the Town Christmas tree, Town celebrations and gatherings, and open-air entertainment.

This work was done as part of the CBC/FTC Market Towns scheme (a partnership project)



Flitwick Town Square has been the subject of recent refurbishment

SECTION 2

SITE, CONTEXT AND ENVIRONMENT

2.4 THE BUILDING

The site is a detached two-storey, flat-roofed commercial building, with accommodation over three levels, consisting of basement, ground and first floors.

The property has an outdoor forecourt to the front and a parking area at the rear. The building dates back to circa the late 1960s to early 1970s and was extended further at ground floor level in the 1980s. In recent years the building was leased and operated as a bank by Barclays PLC, and is now vacant..

A double-height space spanning the middle façade was used as the banking hall and waiting area. The building has a well-maintained exterior forecourt and a gated, fenced parking area to the rear. The property appears to be in a fair condition, considering its age.



The existing is in fair condition considering its age but would benefit from remodelling either at base building or fit out stage.

SECTION 2

SITE, CONTEXT AND ENVIRONMENT

2.5 FLOOD RISK

According to the Environment Agency's Flood Risk website, the location is in Flood Zone 1 which has the lowest danger of flooding

2.6 CONTAMINATION

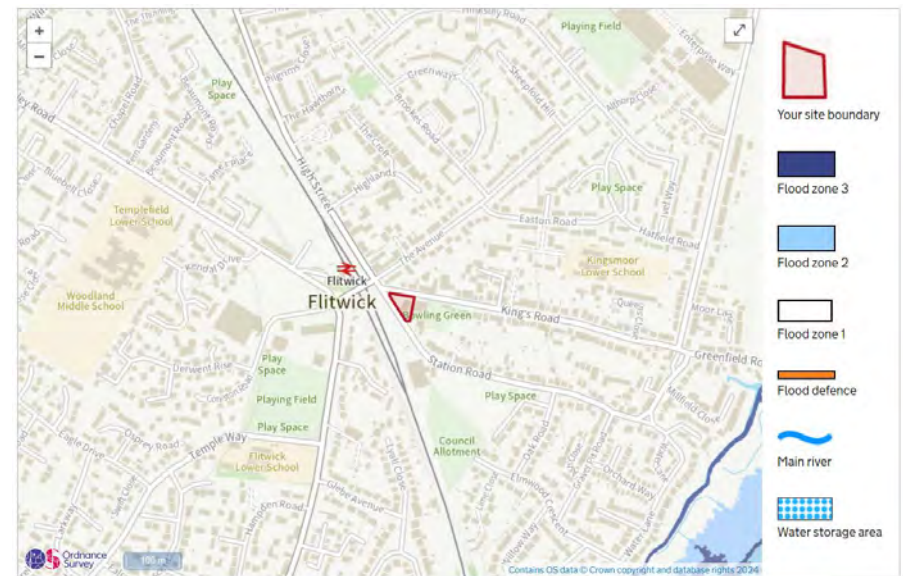
There is no evidence that the site is contaminated or that contamination from outside sources may occur there.

2.7 SITE OF SPECIAL SCIENTIFIC INTEREST SITE (SSSI)

The application site is not on or close to a SSSI.

2.8 UTILITIES

Water, electricity, gas, telephone, sewerage and other services are connected to the site.



Environmental Agency Flood Risk Map

SECTION 2

SITE, CONTEXT AND ENVIRONMENT

2.09 LISTED MONUMENT

The building and the square itself is not listed however the memorial cross at the front of the square is Grade 2 listed. The Listing itself is dated 08 June 2023 and the associated map shows the actual extent of the listing of the footprint of the memorial itself not extending beyond into the square.



The Square is used for memorial services and other important events

SECTION 2

SITE, CONTEXT AND ENVIRONMENT

2.10 TRANSPORT AND HIGHWAY IMPACTS

The site has easy access to public transportation, bike and pedestrian routes, and pedestrian walkways.

Overall, it is believed that there would be no negative effects on transportation or highways from the proposals. There would be some on-site parking; the current access arrangements would not necessarily be changed.

2.11 LOCAL SERVICES

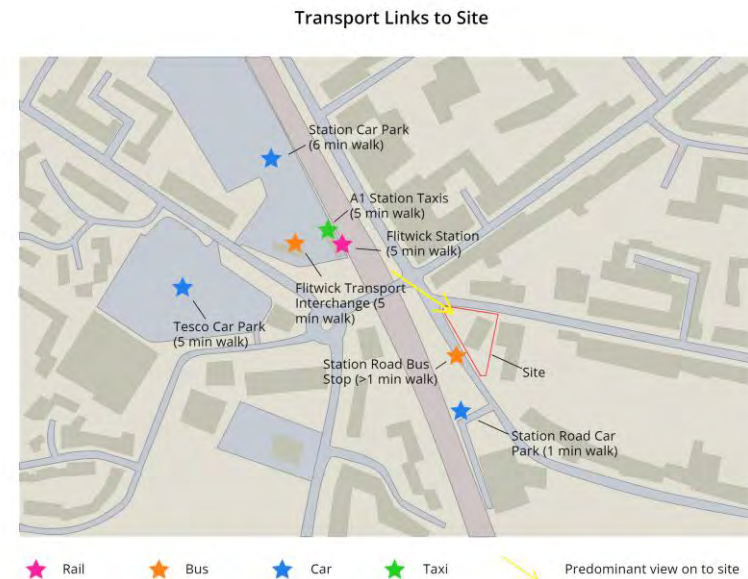
The site is located in the town centre it is within walking distance of a wide variety of services and facilities.

<https://www.cbtravelchoices.co.uk/>

The location is 150 metres from both the Railway Station and Kings Road bus stops. Regular services to surrounding towns and sizable villages, such as Bedford, Ampthill, Teddington, Harlington, Kempston, and Dunstable, are offered at these bus stops. Situated just 350 metres from Flitwick train station, the location offers regular Thameslink rail services to Bedford in the north and Kings Cross in the south, which connects to continental Europe.

<https://www.cbtravelchoices.co.uk/the-rail-network-in-central-bedfordshire>

<https://www.cbtravelchoices.co.uk/bus-services-and-routes>



SECTION 3 PLANNING

3.1 PLANNING - RELEVANT PLANNING HISTORY

Application

LPA Reference CB/24/01388/LDCP

Certificate of lawful use or development

The Central Bedfordshire Council certified that the existing use of the building falls within Class E of the Town and Country Planning (Use Classes) Order 1987 for the use of the property for restaurant, retail shop and post office. The proposed use does not result in a material change of use of the application site and the operations therefore constitute permitted development for which planning permission need not be obtained

Application

LPA Ref: CB/19/03318/PASD Dated 25.11.19

Prior Notification of change of use from a Shop to

Dwelling: Change of use of the first floor of the

building from A2 (financial and professional

services) to 1x two-bedroom flat and 1x

one-bedroom flat (C3 – dwelling houses)

Outcome: Prior Approval - Approved Change Of Use

SECTION 4

FACADE

4.1 FAÇADE

Elevations

The existing façade will be subject to a full refurbishment and cleaning programme

Handrails

Existing unsightly ramp and handrail to the front will be replaced with an elegant design without handrails

Unsightly handrails around the perimeter of the roofs will be removed and replaced with a “Man Safe” Fall restraint system which will not be visible

Windows

All external windows and doors will be replaced with modern doubled glazed aluminium units in a powder coated anthracite paint finish. Energy efficiency can be drastically improved through the installation of an updated window installation

Shopfronts

Full height single glazed shopfront with satin finish stainless steel edge support channels to the foot, head and reveal connections to the existing pilasters, with an integrated fully glazed door.

Manifestation to glazing

Any manifestation applied will be by the tenant to the new shopfronts & will be no more than 20% of the shopfront glazing, solid blocks of film will not be acceptable, all subject to Landlord approval

SECTION 5

SECURITY AND DISABLED ACCESS

5.0 SECURITY,

Deliveries are via a secure rear area.

Refuse/recycling and staff bike stands are located within the secure area which will be accessed by a key card or similar at automatic gates.

5.1 DISABLED ACCESS

Level Public access into the building is achieved via new ramps and steps that comply with all relevant legislation



SECTION 6

SERVICING, DELIVERIES, REFUSE AND RECYCLING

6.1 SERVICING/DELIVERIES

Deliveries should take place in the dedicated service area and provision for refuse storage is shown..

Please refer to Markides Technical note dated 01.07.2024

6.2 REFUSE AND RECYCLING

- Dedicated areas for separation of waste will be provided.
- Refer to Technical Note from Markides dated 01.07.2024

SECTION 7 SUSTAINABILITY

7.0 SUSTAINABILITY AND LOW ENERGY DESIGN

The strategy for reducing energy use and associated carbon emissions through the design includes.

- Investigate reduction of energy demand through passive solutions and best practice design.
- Increase insulation through specification of high-performance windows
- Increase insulation through filling of existing cavity walls with insulation
- Install Low energy light fittings throughout the scheme to reduce electricity demand.
- A building regulations application will be on the basis off the latest Approved Document L which will ensure the tenant maximises the low carbon requirements

We are working with energy consultants to ensure best practice and best reduction in energy use. EPCs for the shell and he fit out will be issued and this will inform low carbon design requirements for the incoming restaurant tenant



FLITWICK TOWN COUNCIL
3 STATION ROAD FLITWICK – EXTERNAL WORKS
DESIGN AND ACCESS STATEMENT

CONTACT

Project Design and Delivery Team
Property and Construction Service
Place and Infrastructure
Luton Borough Council
Tel: 01582 54 6010

FLITWICK TOWN COUNCIL
3 STATION ROAD FLITWICK –
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SECTION 1.0 WINDOWS AND DOORS

1.0 SHELL WINDOWS AND DOORS



SECTION 1.0

WINDOWS AND DOORS

1.0 SHELL WINDOWS AND DOORS



SECTION 1.0 WINDOWS AND DOORS

1.0 SHELL WINDOWS AND DOORS





FLITWICK TOWN COUNCIL
3 STATION ROAD FLITWICK
MATERIALS

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03.07.2024

Dear Stephanie

X2301 – 3 Station Road Flitwick MK45 1JS

I trust you are well.

I thought it might be useful to go over some of the design issues we have been looking at as we have progressed to give some context to the drawings and cost plan.

Please therefore find below points that have been addressed and my attempt to explain the reasoning behind why we have gone down certain routes.

1.0 Low Energy Design

The strategy for reducing energy use and associated carbon emissions through the design include.


- Removing internal walls to increase light penetration.
- Enlarging some of the openings in the external walls to increase light penetration.

Investigation of reducing energy demand through passive solutions and best practice design.

- Generating power on site through the use of renewable energy technologies.
- Look at the use of Air-to-Air Source Heat pumps.
- Investigate use of PV (Photovoltaic panels that generate energy)

Modify the building fabric in terms of U-values to reduce heat transfer and achieve good airtightness.

- Increase insulation through specification of high-performance windows.
- Increase insulation through filling of existing cavity walls with insulation.
- Use building services systems of high efficiency. Install Low energy light fittings throughout the scheme to reduce electricity demand.



Vision energies are providing guidance and calculations with regard to the energy and carbon saving measures, and these will be fed into the requirements for EPCs at both shell and fitout.

2.0 Transport, deliveries, refuse and parking.

Working with Markides Transport we have looked at Servicing the units, provision of parking and refuse collection considering National and Local requirements.

Markides' Technical assessment sets out the traffic and transport context in relation to the development proposals and confirms the physical restraints on the site that have influenced the design.

The design shows a secure area with parking, separate staff cycle shelters and separate refuse and recycling areas for the retail and the restaurant. Again, this can be refined through discussion with prospective tenants and controlled through the lease.

3.0 Structural Engineering

Gyoury Associates have provided information supporting the design including confirmation that the existing structure is sufficient to take the loads required on the first floor for predicted occupancy and also for the possible plant on the roofs. They are also providing the design for the underground drainage.

4.0 Mail Delivery and letterboxes to Units A and B

It is expected that mail delivery will take place during business hours and that the mail will be handed in to the buildings, so no letterboxes have been shown.

5.0 Fire Escape

We have engaged with a firm of fire Consultants BB7 to fully understand the escape requirements that any tenant will be working with. With BB7 we have calculated that, based upon the use of a sole staircase, there would be circa 100-person occupancy on the First Floor. We have investigated a provision of an additional internal staircase that could be installed by the tenant which would increase the capacity. The position of the stair is flexible, but it does need to be positioned to allow direct escape to the outside. We can engage with any prospective tenant of the restaurant on this basis.

BB7 have confirmed travel distances generally including from the roof which will be occasionally occupied by maintenance personnel. They have advised that sounders and flashing lights would be needed for early warning for maintenance staff on the upper roof and the tenant can install an additional lowerable ladder at the lower roof, so escape does not have to be via the building. We can engage with prospective tenants on this basis.

6.0 Asbestos

A new asbestos report has been commissioned from Bureau Veritas and we await confirmation of their date to visit.

7.0 Trees Arboriculturist

Pearce have provided a report on the existing trees which has influenced the way we have designed access into the rear area. The report is also important in assessing what precautions need to be taken to protect the trees during the course of the works.

8.0 Design Development Architecture and the facade

New windows, doors and refurbishment of the fabric including cleaning of the brickwork all contribute to bringing the façade up to an attractive standard.

Removing the existing railings on the roof declutters and improves the building line visually.

Removing the existing front door ramp and replacing with a less intrusive one visually also contributes to bringing the building up to standard attractive to a prospective tenant.

9.0 New Roof

There is a limited life to the existing roof and a separate contract to replace the roof is being undertaken in advance of the main works.

10.0 Planning

Certificate of Lawfulness


This has been achieved and confirmed the Planning Use Class remains as is and therefore a change of use application is not required.

External Works Planning Application

The new application is for external works and although the planning department will comment on the proposals, the use of the building for retail and restaurant purposes has now been established and it would not be possible for this to be stopped in principle.

Tenant Changes and further planning applications

The incoming restaurant tenant may need to make some physical changes and depending on the scale of these there may be a need for them to make a new additional application. If the changes are relatively small a “Minor Material amendment” can be applied for which is less onerous than making a new full application.



The incoming restaurant tenant will need to make a new application for any external plant including extract ductwork from the kitchen. We have assumed the position of this extract to be at the rear as this is the least sensitive elevation. However, the exact siting and size will be down to the tenant. There may need to be some acoustic investigation by the tenant to support this. We have shown an area where the restaurant tenant plan can sit.

The incoming restaurant may wish to have outdoor seating in front. A separate planning application either by the landlord or the tenant would be required to secure this. This has been decoupled from the main external works planning application, as although probably not contentious, could possibly delay the main application if there were any issues. The tenant would need to confirm the external covers required and if awnings or other protection would be required.

11.0 Access to WC for traders and others working on markets and events on the town square.

Discussions during the design stage investigated the need for a separate toilet for the above. It was agreed however that the best solution for this would be to allow the use of the restaurant customer toilets, and this could be managed through the lease.

12.0 Building Control

It's a legal requirement for building work to meet the Building Regulations (2010) and building control services, also known as building control bodies, check that work complies with the Building Regulations and associated legislation.

Building control surveyors check that building work complies with the building regulations, a set of standards intended to protect people's safety, health and welfare in and around built environments.

It's important to realise that those carrying out building work are responsible for complying with the building regulations and the role of building control is to check that they do so.

Building control teams check all aspects of construction including but not limited to:

- foundations
- damp-proofing.
- structural issues
- insulation
- ventilation
- heating
- sanitation

- the accessibility of a building
- fire protection and means of escape in case of fire.

13.0 Security

The wall and fence as boundary treatment is intended to physically inhibit climbing and/or access to parts of a site. I.e. parking, staff cycle shelters and refuse store.

The perimeter gates should only be operable by using the appropriate means of secure access control which can be agreed with tenants through the lease.

The design of the site incorporates appropriate means to allow for secure deliveries at the rear, to the restaurant but also potentially for the retail without interfering with the day-to-day running of the business. This is provided by the secure external compound with easy access to delivery doors. Although the existing walls where retained are not especially high further engagement with the tenant may demonstrate the need to increase the height.

Building features, such as recessed doorways have been avoided Recessed doorways will obstruct natural surveillance whilst collecting wind-blown litter.

A secure door set with emergency exit hardware will be used on the rear elevation for access into the units.

14.0 External waste storage


Waste and rubbish containers, particularly wheelie bins, can be re-positioned and used to aid climbing to vulnerable parts of buildings whilst their contents can be used as fuel for arson attacks. To combat these two risks the bins are within the secure lockable area.

Adequate secure provision (as above) for temporary storage of all recyclable materials awaiting collection or other processing should be provided.

Bin stores for kitchen waste in large catering and other business operations should be located away from the building, as above, although it is accepted that for practical and operational reasons it may be necessary during business hours to have bins temporarily located closer to the kitchen. This will be confirmed with the tenant.

15.0 Rear areas

External lighting



The need for lighting can be part of the review of security with the tenants, the objective of lighting commercial units after dark is to deter or detect an intruder.

Lighting design may be co-ordinated with a CCTV installation depending on tenant requirements.

A lighting scheme should provide uniformed lighting levels with good colour rendition and be sufficient to cater for lawful after dark activity. It should not cause glare or light pollution and should support both formal and informal surveillance of the site. Again, this will can be developed through engagement with the tenant.

16.0 Intruder alarms systems

A suitably designed, fit for purpose, monitored intruder alarm system must be installed.

17.0 Letter box

For the majority of commercial buildings, it is expected that mail delivery will take place during business hours and that the mail will be handed in at reception.

18.0 Accessibility

Accessibility requirements for new buildings in England are set out in the building regulations. They require by law that new buildings make 'reasonable provisions' to allow people access and use buildings and their facilities.

Existing buildings do not need to be upgraded to comply with current building regulations, although a change of use might have required this. However, the Equality Act 2010 requires shops and businesses in England, Wales and Scotland to make 'reasonable adjustments' for disabled people.

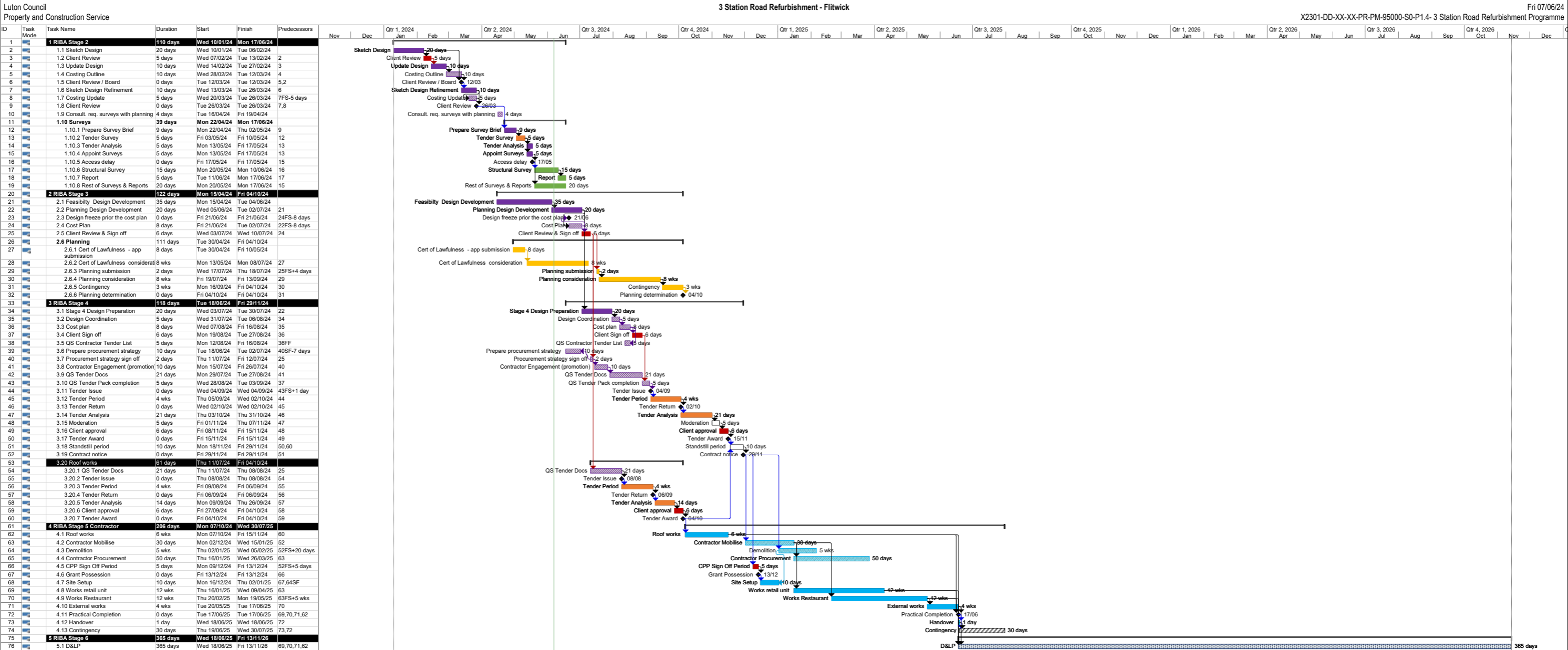
All public areas are accessed by step free ramps however due to the nature of the Site the access into the retail store will be achieved by regarding the existing ground level.

Upper levels of restaurant do not need to be accessed via a lift if a disabled toilet is provided at ground level and our drainage proposal will allow for this. If a tenant does want to provide a lift they can do so.

I hope this is of some uses however please do not hesitate to contact me should there be anything that is not clear.

Kind regards

David Mitton



Project: X2301-DD-XX-XX-PR-P
Date: Fri 07/06/24

Task

Contractor Non Construction Task

Contractor Construction Task

Client Task

Enabling Works

Contingency Task

Third Party Approval Task

Tender Task

Survey Task

Contingency Task

Defects Period

Cost Consultant

Legal / Acquire

EA

Split

Milestone

Summary

Project Summary

Inactive Task

Inactive Milestone

Inactive Summary

Manual Task

Duration-only

Manual Summary Rollup

Manual Summary

Start-only

Finish-only

External Tasks

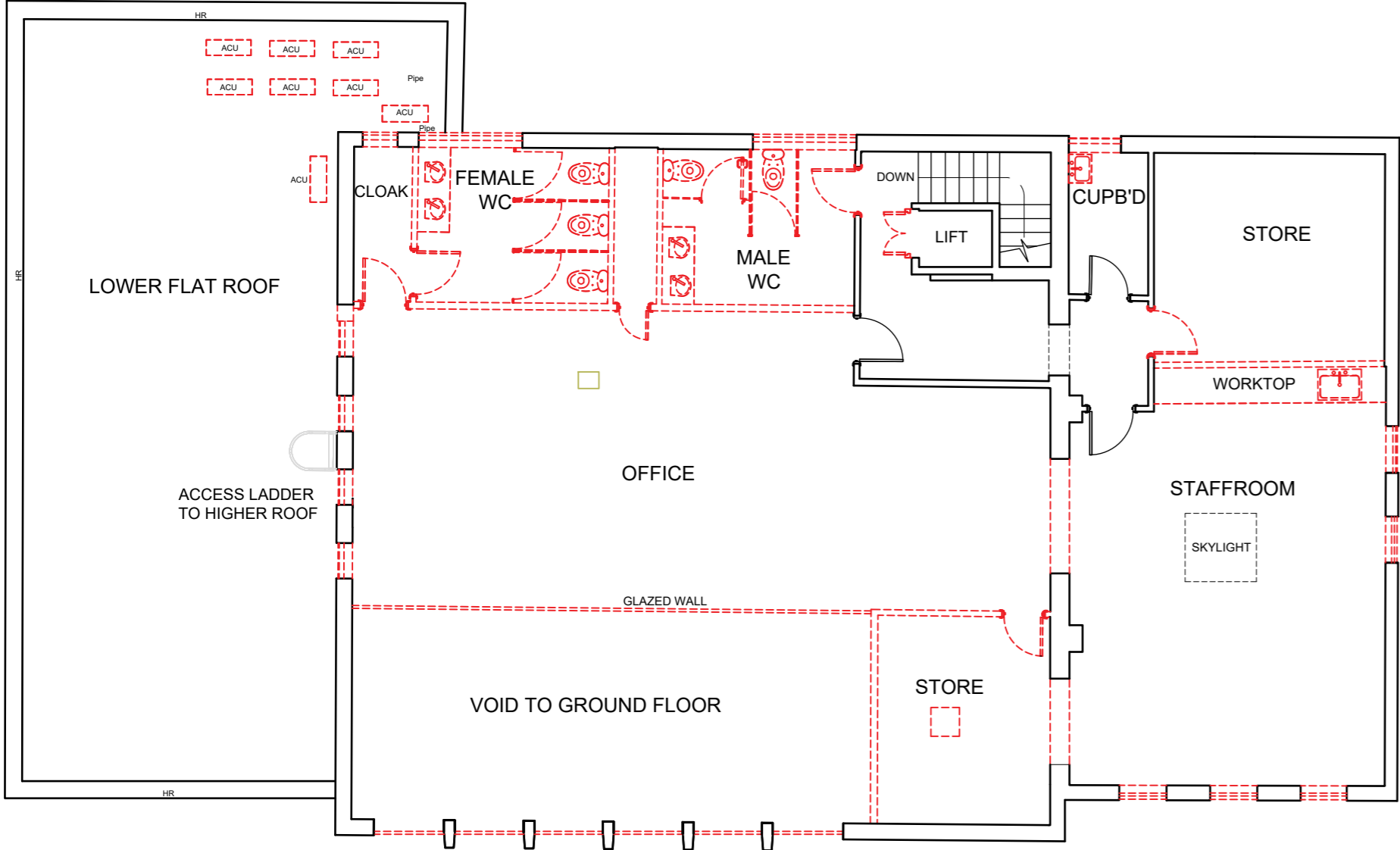
External Milestone

Deadline

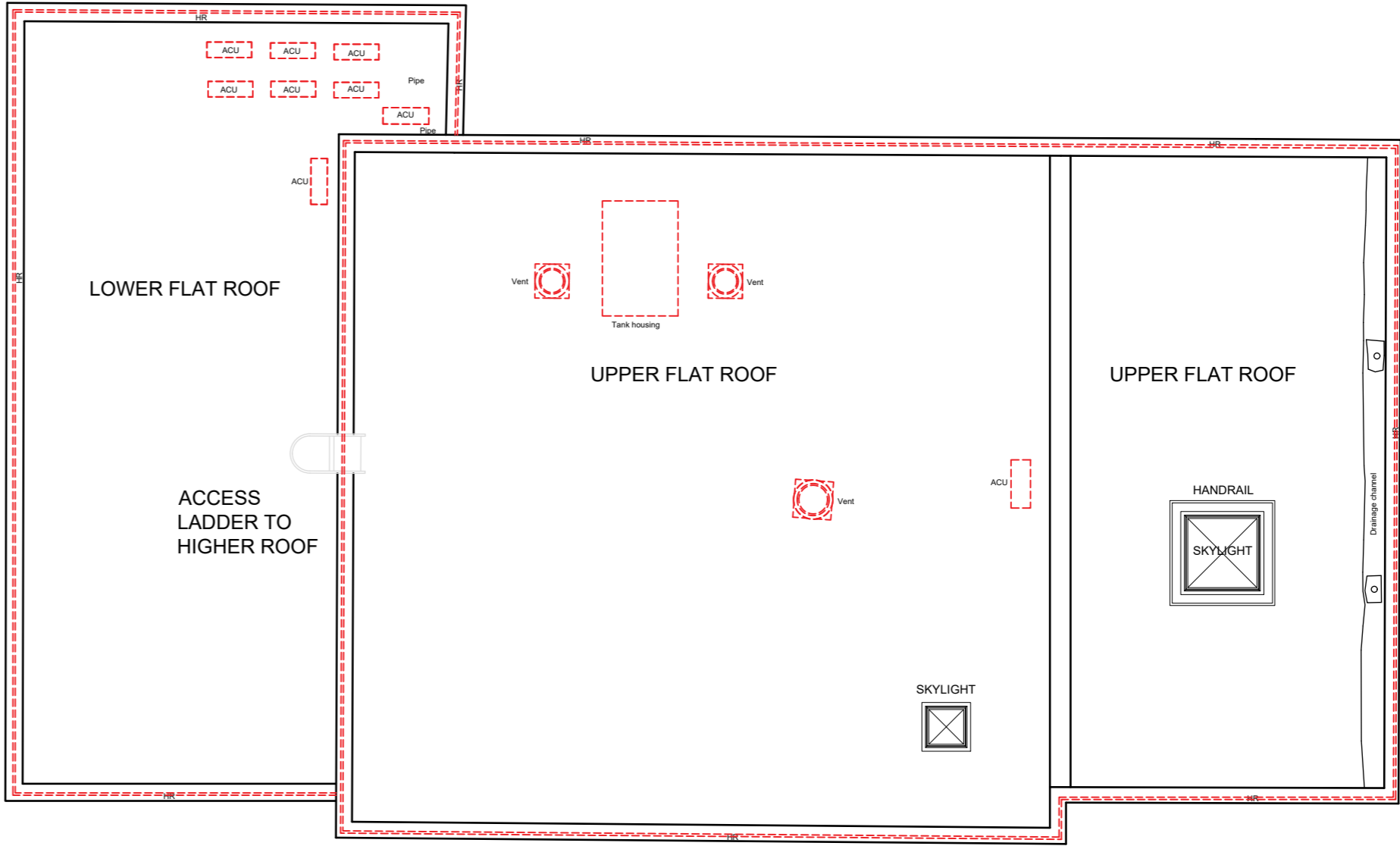
Progress

Manual Progress

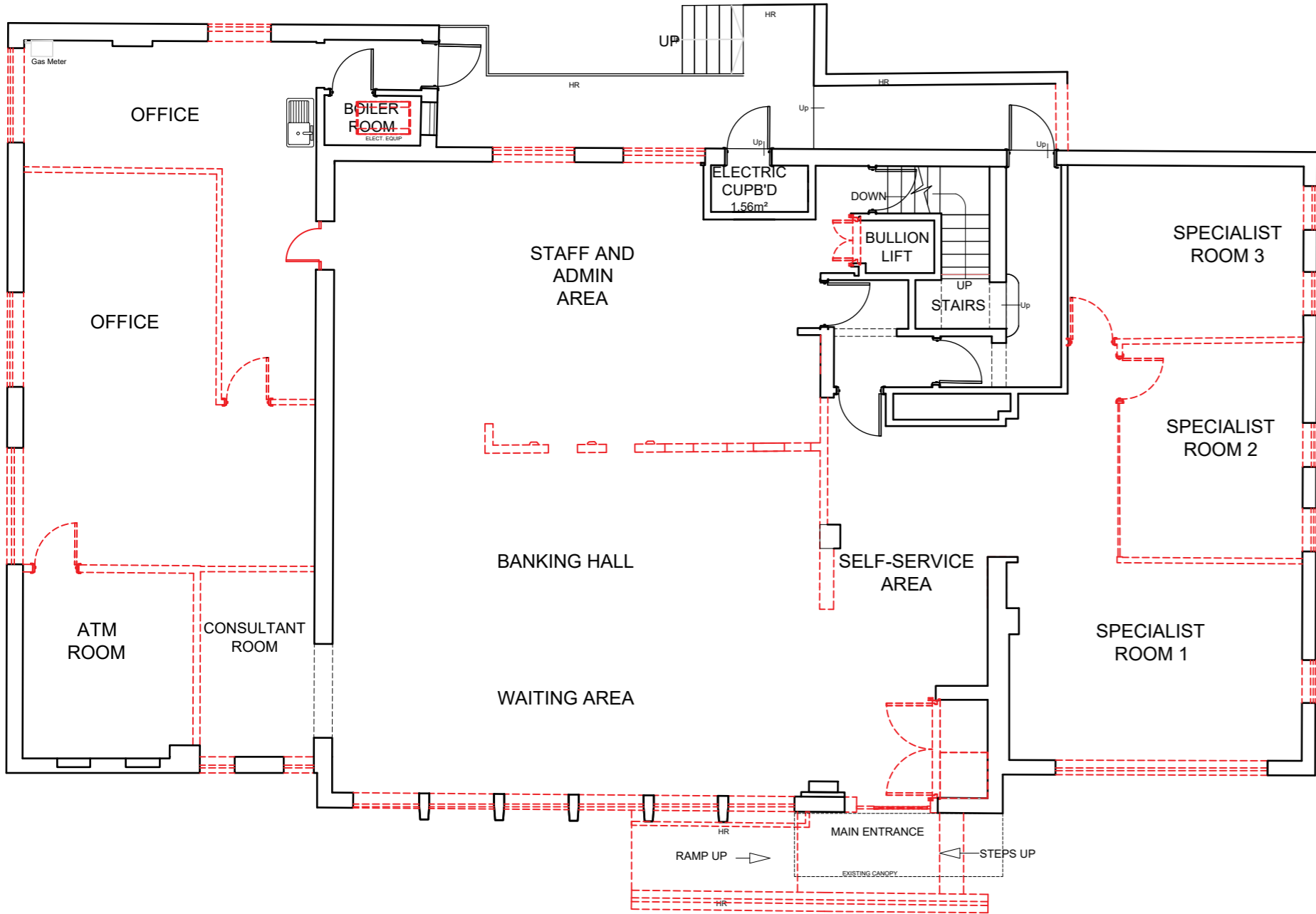
Page 1 of 1



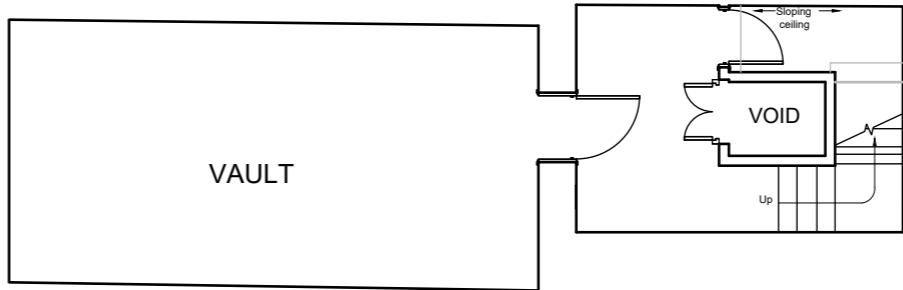
FIRST FLOOR DEMOLITION PLAN
SCALE 1:100



ROOF DEMOLITION PLAN
SCALE 1:100



GROUND FLOOR DEMOLITION PLAN
SCALE 1:100



BASEMENT DEMOLITION PLAN
SCALE 1:100

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LEGEND

DEMOLISHED AREAS

NB: Drawing to be read in conjunction with Structural, mechanical and electrical engineers drawings

P0 Issued for Planning AK 02.07.24

REV DESCRIPTION BY DATE

DRAWING STATUS
PLANNING

Luton

**PLACE AND INFRASTRUCTURE DEPARTMENT
PROPERTY & CONSTRUCTION**
Apex House 30-34 Upper George Street Luton LU1 2RD
Tel : 01582 546000 Fax : 01582 546674

DRAWING TITLE
EXISTING GROUND, FIRST &
BASEMENT FLOOR PLANS

PROJECT NAME
3 STATION ROAD FLITWICK
EXTERNAL WORKS

ADDRESS

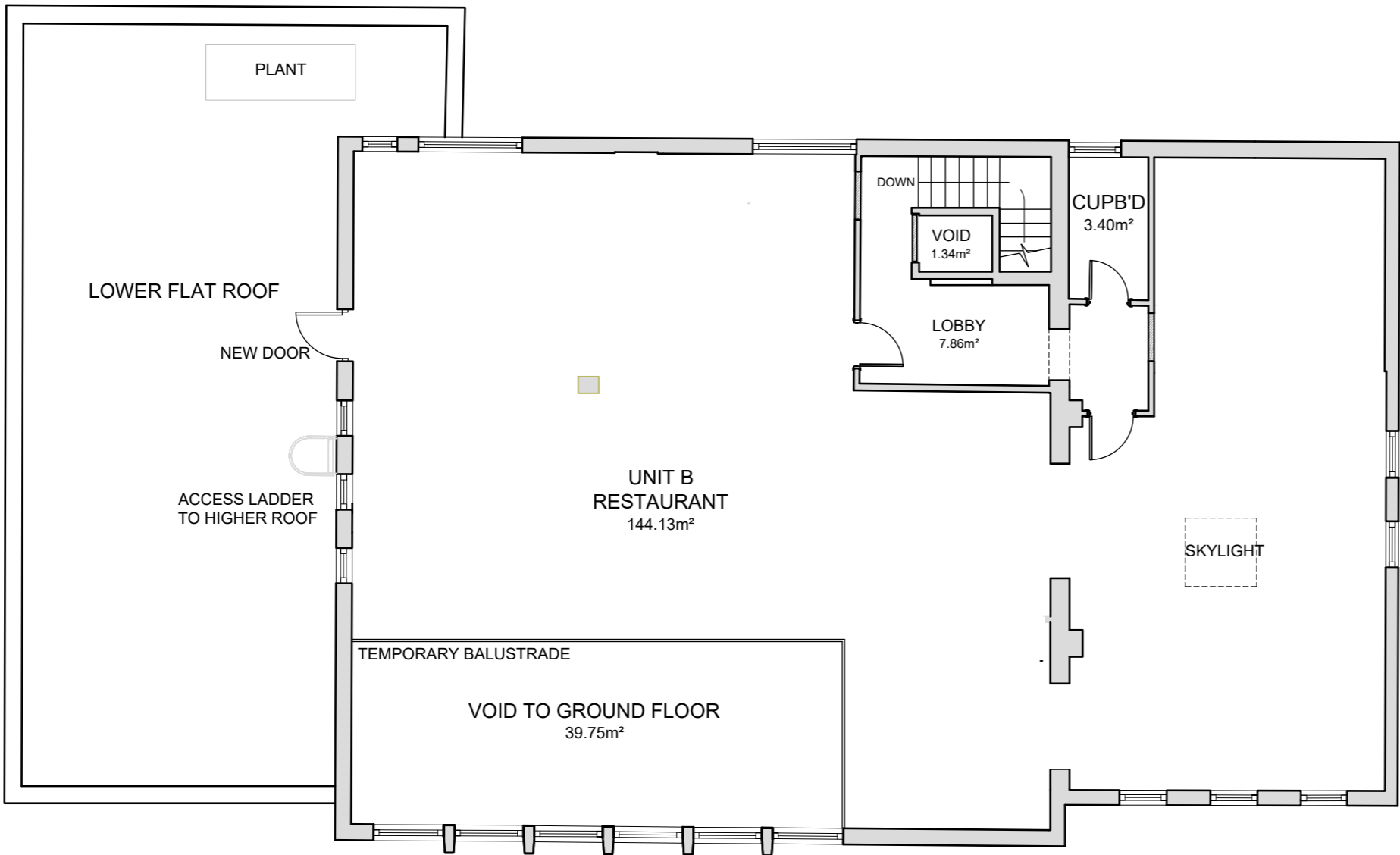
3 STATION ROAD
FLITWICK
MK45 1JS

CLIENT
FLITWICK TOWN COUNCIL

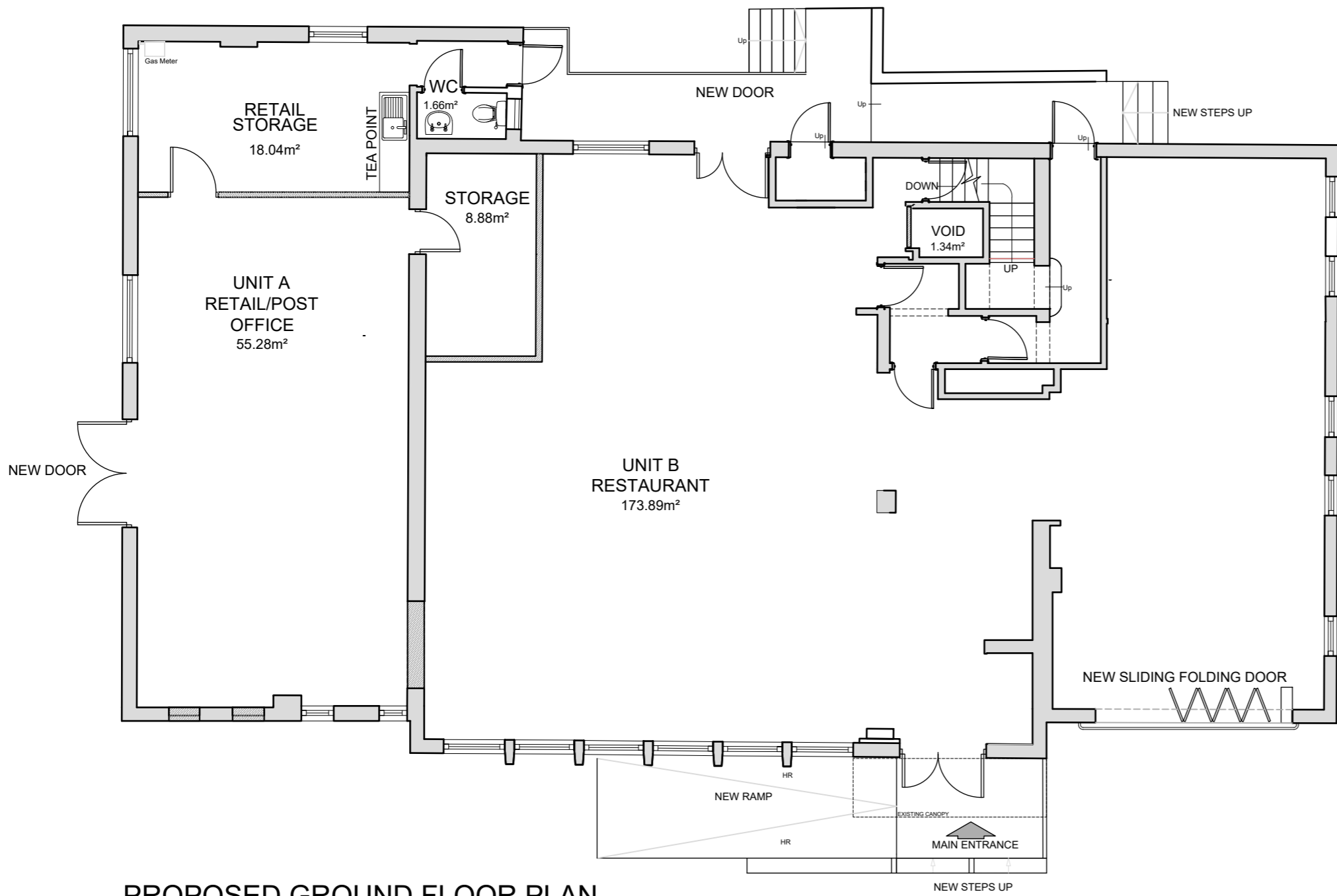
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SHEET NO: 1 OF 1 CHECKED BY DM DATE 24.06.24

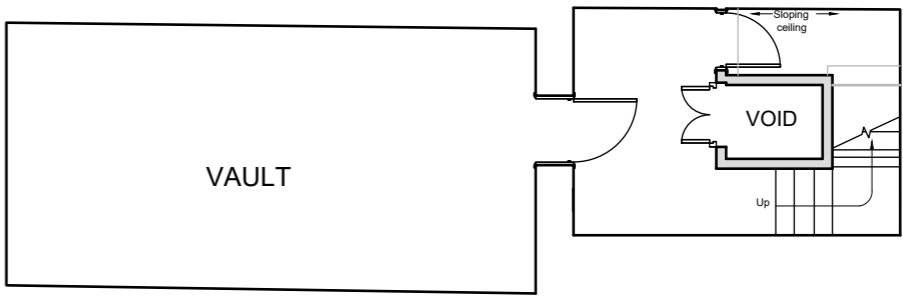
DWG NO. X2301-DD-XxZZ-DR-A-10 102 S8 P0



PROPOSED FIRST FLOOR PLAN
SCALE 1:100



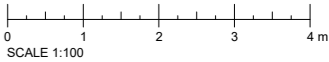
PROPOSED GROUND FLOOR PLAN
SCALE 1:100



PROPOSED BASEMENT PLAN
SCALE 1:100

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LEGEND

- EXISTING WALLS
- NEW WALLS / BLOCKED UP

NB: Drawing to be read in conjunction with Structural, mechanical and electrical engineers drawings

P0 Issued for Planning AK 02.07.24

REV DESCRIPTION BY DATE

DRAWING STATUS

PLANNING

Luton

**PLACE AND INFRASTRUCTURE DEPARTMENT
PROPERTY & CONSTRUCTION**
Apex House 30-34 Upper George Street Luton LU1 2RD
Tel : 01582 546000 Fax : 01582 546674

DRAWING TITLE
PROPOSED GROUND FLOOR, FIRST FLOOR & BASEMENT FLOOR PLAN

PROJECT NAME
3 STATION ROAD FLITWICK
EXTERNAL WORKS

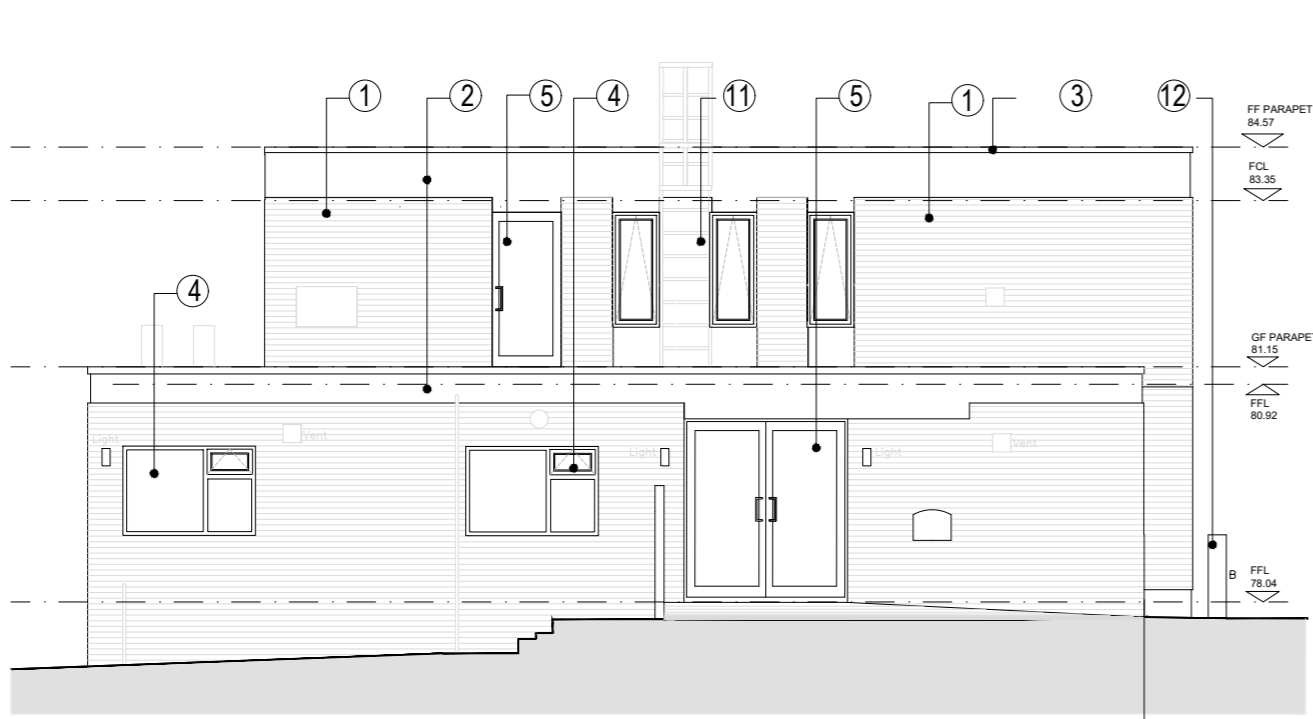
ADDRESS
3 STATION ROAD
FLITWICK
MK45 1JS

CLIENT
FLITWICK TOWN COUNCIL

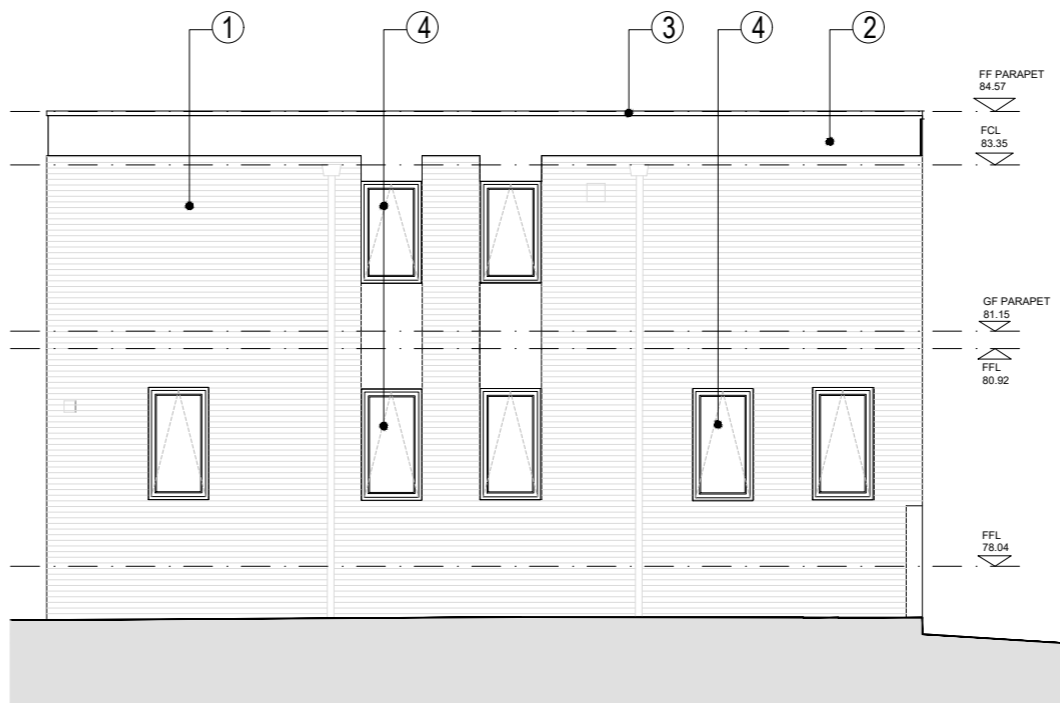
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SHEET NO: 1 OF 1 CHECKED BY DM DATE 24.06.24

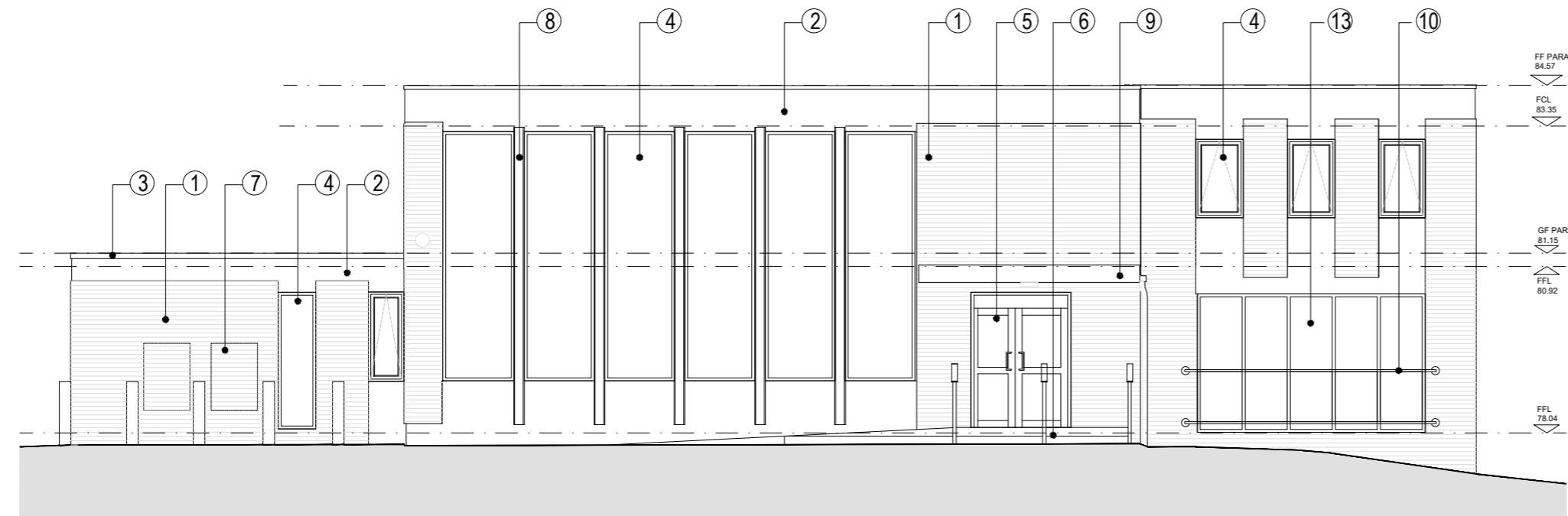
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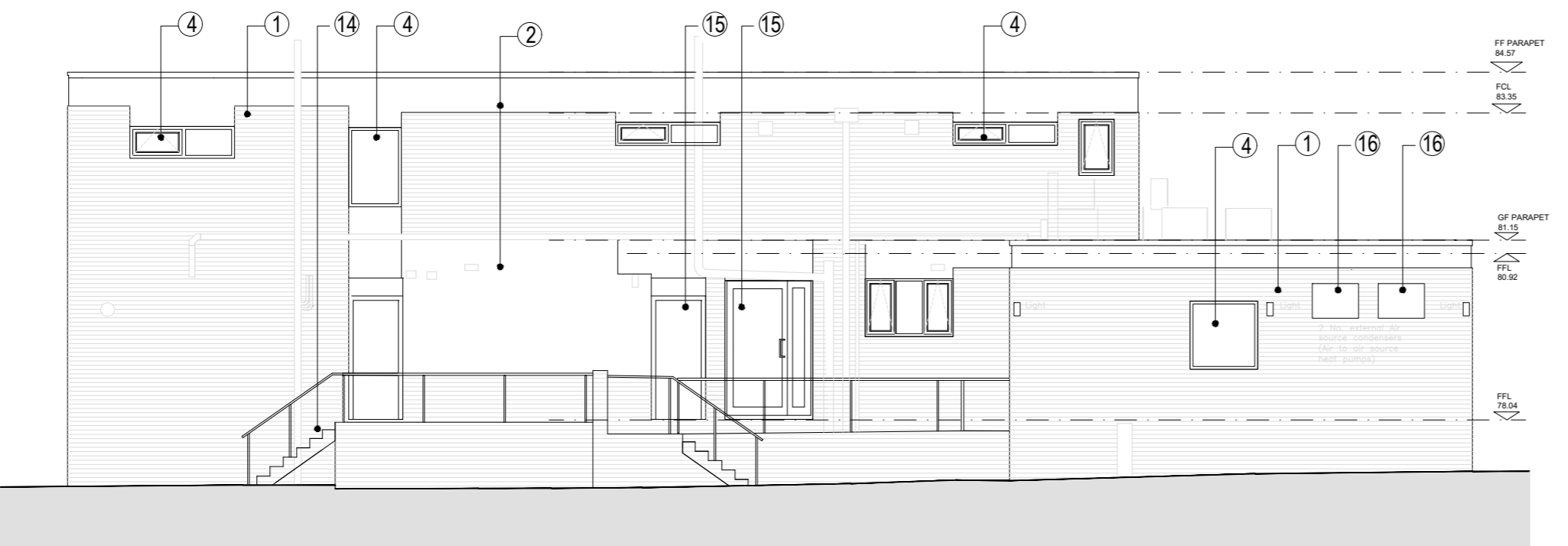
PROPOSED NORTH ELEVATION



PROPOSED SOUTH ELEVATION



PROPOSED WEST ELEVATION

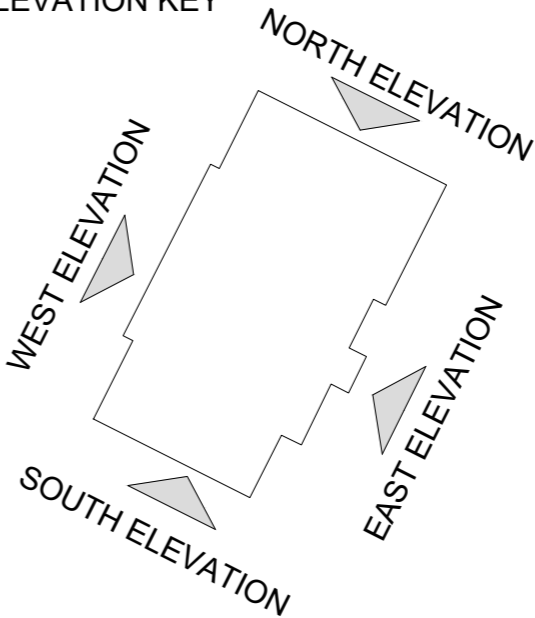


PROPOSED EAST ELEVATION

LEGEND

- ① Existing brick
- ② Existing cladding
- ③ GRP trim
- ④ Double glazed PPC Aluminium windows - Anthracite Grey
- ⑤ Double glazed PPC Aluminium doors - Anthracite Grey
- ⑥ New concrete entrance steps and ramp
- ⑦ Existing ATM aperture blocked up with bricks to match existing
- ⑧ Existing stone mullions
- ⑨ Existing canopy
- ⑩ New glass and steel balustrade
- ⑪ Existing Cat ladder to Upper roof
- ⑫ Existing Bollards
- ⑬ Sliding folding PPC Aluminum door - Anthracite Grey
- ⑭ New steps
- ⑮ Metal doors - Anthracite Grey
- ⑯ External air source condensers (air to air source heat pumps)

ELEVATION KEY



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PLANNING			

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PLACE AND INFRASTRUCTURE DEPARTMENT
PROPERTY & CONSTRUCTION
Apex House 30-34 Upper George Street Luton LU1 2RD
Tel : 01582 546000 Fax : 01582 546674

DRAWING TITLE
PROPOSED ELEVATIONS

PROJECT NAME
3 STATION ROAD FLITWICK
EXTERNAL WORKS

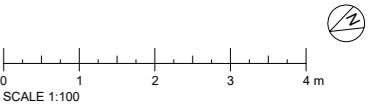
ADDRESS
3 STATION ROAD
FLITWICK
MK45 1JS

CLIENT
FLITWICK TOWN COUNCIL

SCALE	DRAWN BY	DATE
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SHEET NO:	CHECKED BY	DATE
1 OF 1	DM	30.06.24
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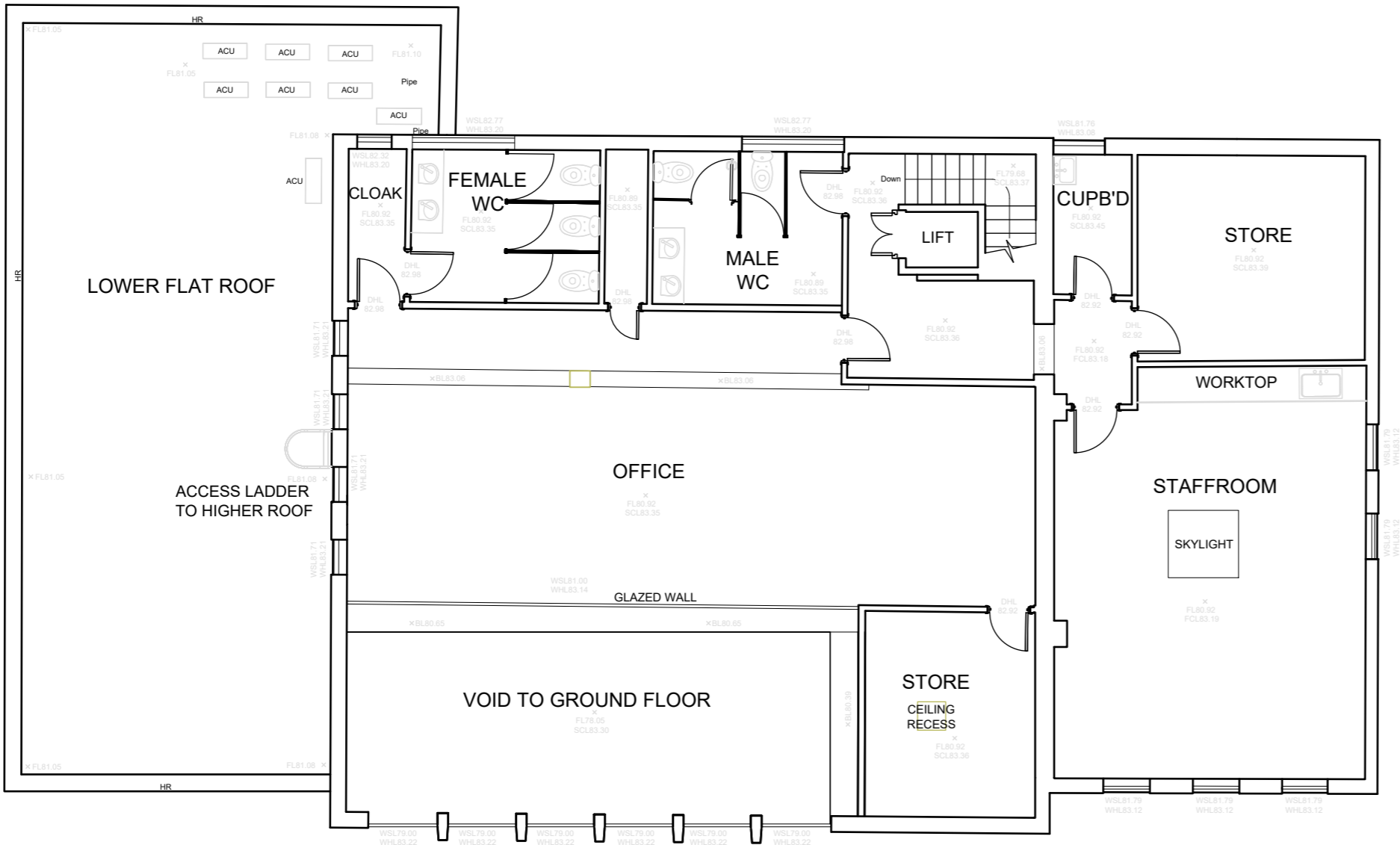
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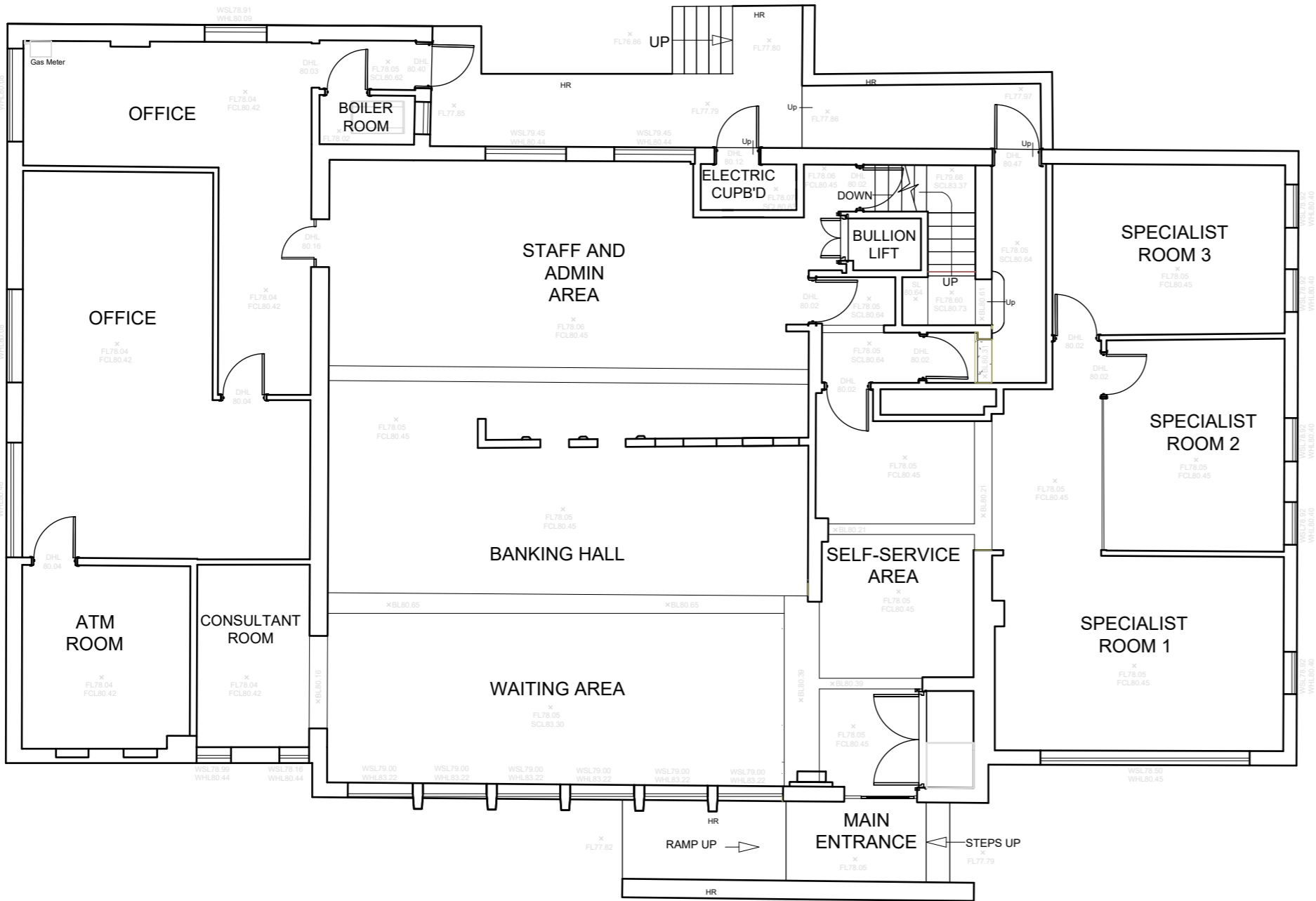


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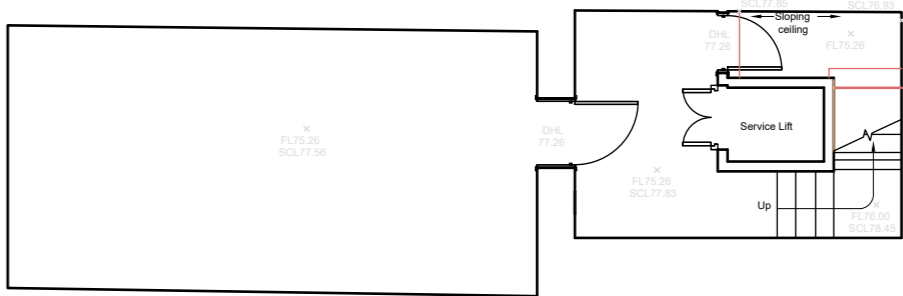
NB: Base layout extracted from
existing drawing. Dimensions
are indicative only and are
subject to change following
onsite measured survey that is
to be provided by contractor



EXISTING FIRST FLOOR
SCALE 1:100



EXISTING GROUND FLOOR
SCALE 1:100



EXISTING BASEMENT PLAN
SCALE 1:100

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REV	DESCRIPTION	BY	DATE
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PLANNING



**PLACE AND INFRASTRUCTURE DEPARTMENT
PROPERTY & CONSTRUCTION**
Apex House 30-34 Upper George Street Luton LU1 2RD
Tel : 01582 546000 Fax : 01582 546674

DRAWING TITLE
EXISTING GROUND FLOOR, FIRST FLOOR
& BASEMENT FLOOR PLAN

PROJECT NAME
3 STATION ROAD FLITWICK FEASIBILITY
EXTERNAL WORKS

ADDRESS
FORMER BANK
3 STATION ROAD
FLITWICK
MK45 1JS

CLIENT
FLITWICK TOWN COUNCIL

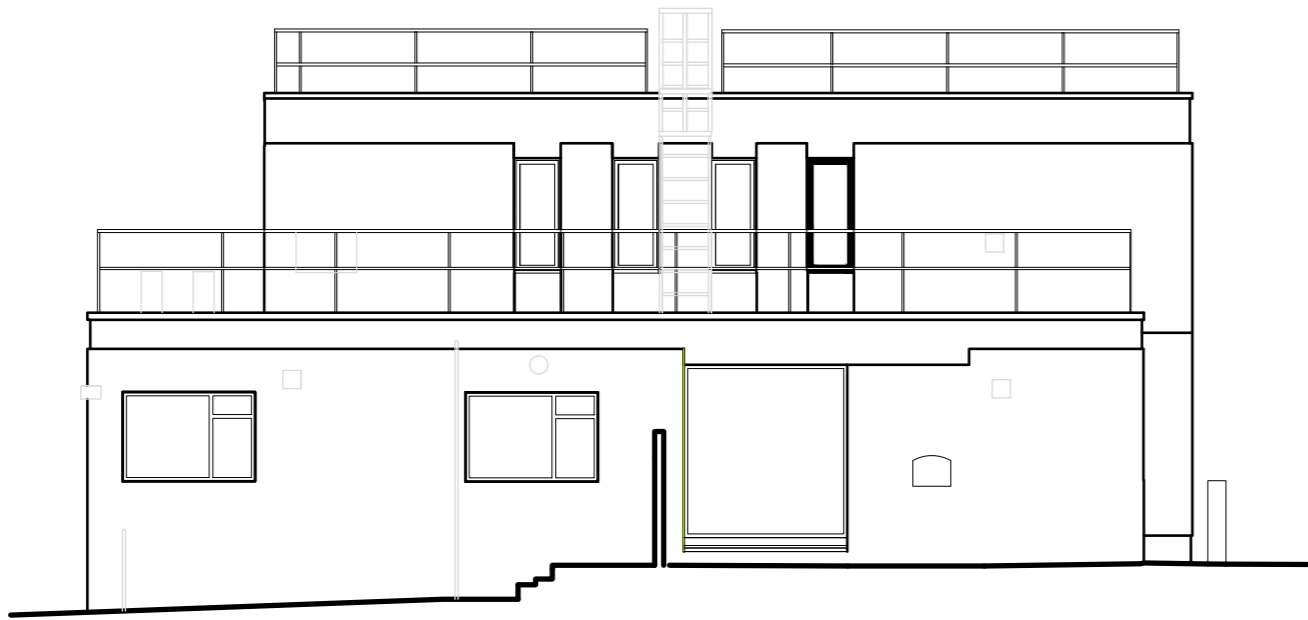
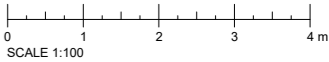
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SHEET NO:	CHECKED BY	DATE
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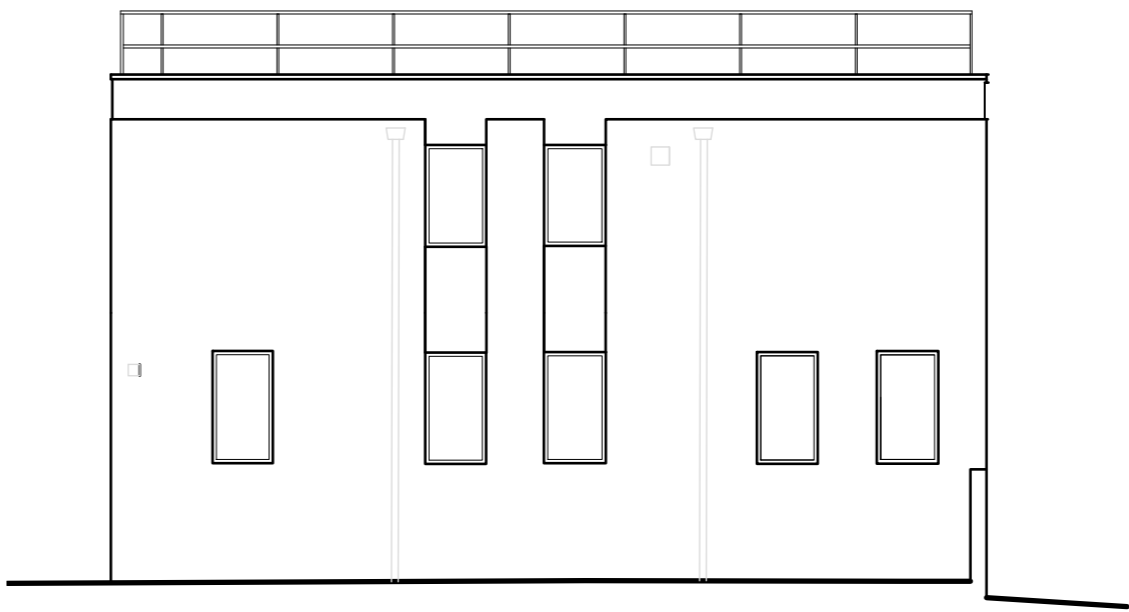
DWG NO.	STAT:	REV:
X2301-DD-ZZ-ZZ-DR-A-70 101	S8	P0

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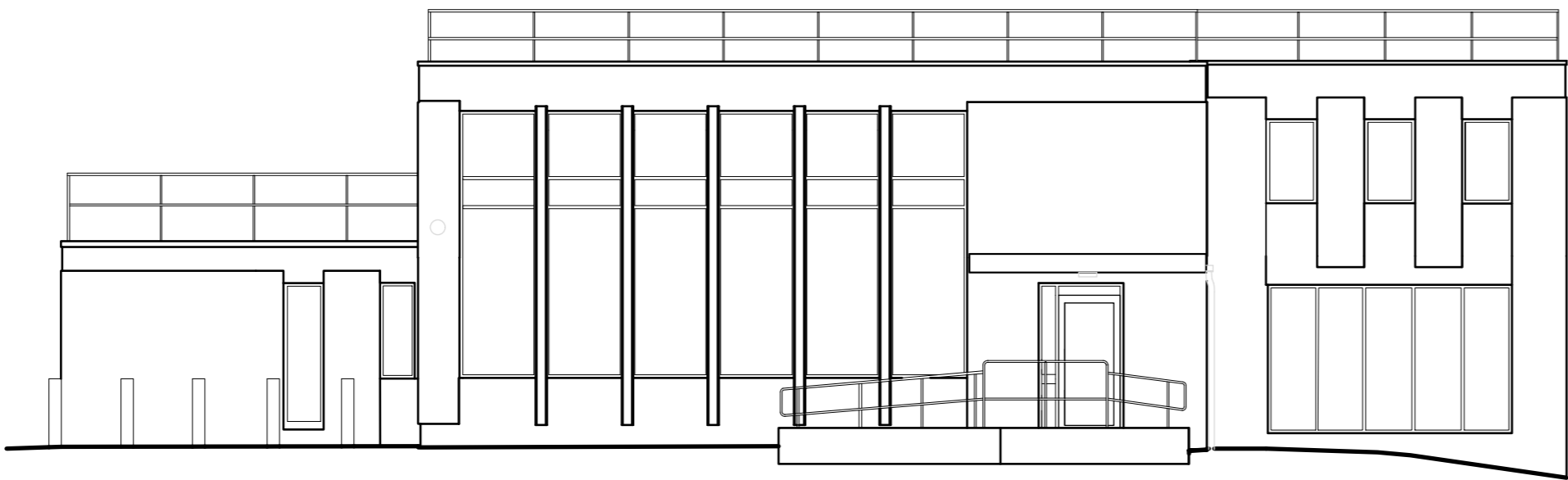
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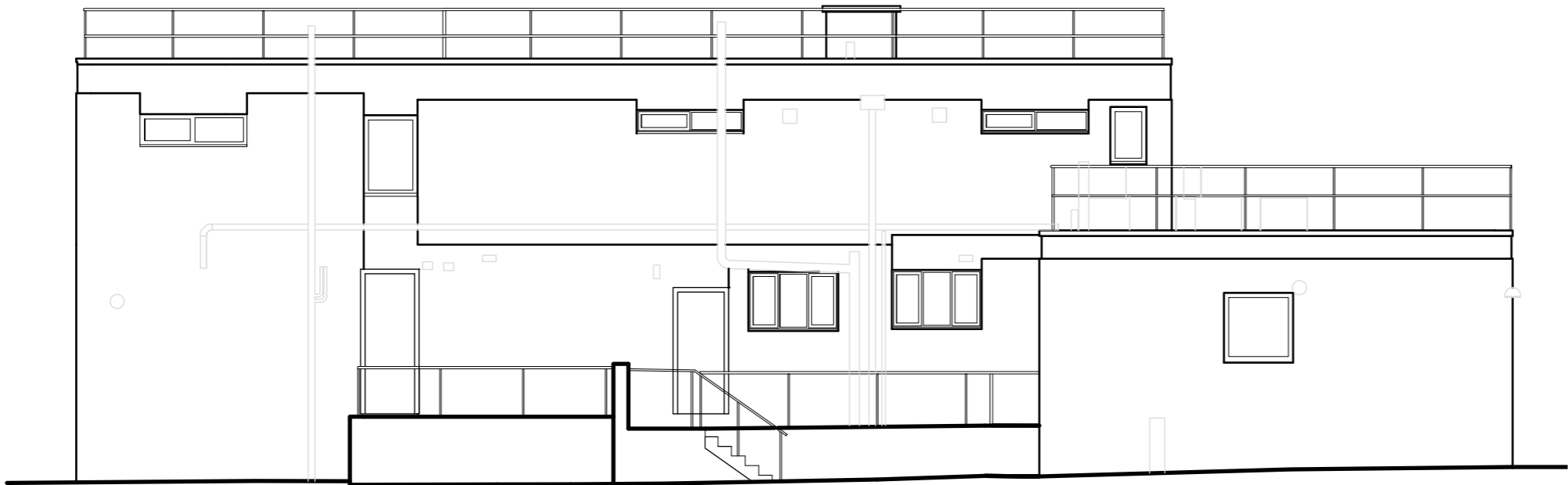
EXISTING NORTH ELEVATION



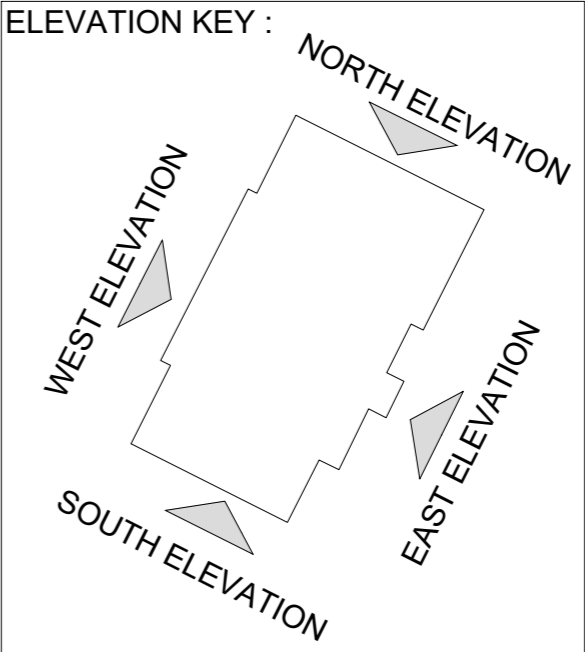
EXISTING SOUTH ELEVATION



EXISTING WEST ELEVATION



EXISTING EAST ELEVATION



P0	Issued for Planning	AK	02.07.24
REV	DESCRIPTION	BY	DATE

DRAWING STATUS
PLANNING

Luton

PLACE AND INFRASTRUCTURE DEPARTMENT
PROPERTY & CONSTRUCTION
Apex House 30-34 Upper George Street Luton LU1 2RD
Tel : 01582 546000 Fax : 01582 546674

DRAWING TITLE
EXISTING ELEVATIONS

PROJECT NAME
**3 STATION ROAD FLITWICK
EXTERNAL WORKS**

ADDRESS
**3 STATION ROAD
FLITWICK
MK45 1JS**

CLIENT
FLITWICK TOWN COUNCIL

SCALE	DRAWN BY	DATE
1:100@A2	AK	05.06.24

SHEET NO:	CHECKED BY	DATE
1 OF 1	DM	30.06.24

DWG NO.	STAT:	REV:
X2301-DD-XxZZ-DR-A-70 300	S8	P0

DESIGN AND DELIVERY TEAM, PROPERTY AND INFRASTRUCTURE

QUANTITY SURVEYING SECTION - COST PLANNING

Job title	3 Station Road Flitwick Redevelopment
Type of work	Renovation / Conversion
Project	Based on X2301 Flitwick03.06..2024 Option A1 and B1-Ground Floor Option A1 Proposed
Market conditions	Competitive
Base date for estimating	02/07/2024, 2Q2024
Location	Flitwick, Bedfordshire
Site description	Slightly sloped site. 3 Station Road is a two storey flat roofed commercial property with accommodation over three floors, consisting basement, ground and first. Built in circa the late 1960s to early 1970s, the building was extended further at ground floor level in the 1980s. In recent years the building was leased and operated as a whole Barclays Bank. The former banking hall and waiting area has a double height space that spans the central façade. The building is currently unoccupied.
Type of contract	Traditional JCT Intermediate form of Contract with Special Conditions
Cost fluctuations	Fixed
Client Type	Public-sector authority
Size	
GIFA	447.00
Primary number of storeys	2
Secondary number of storeys	N/A
Functional units	
No. of places	N/A
Indices for adjusting project price level	
BCIS all-in TPI (base: 390, 2Q 2025 =404)	3.59%
BCIS all-in GCBI (base: 457, 2Q 2025 =474)	3.72%
Estimate prepared by	Luton Borough Council
Estimate prepared	02/07/2024

DESIGN AND DELIVERY TEAM, PROPERTY AND INFRASTRUCTURE **QUANTITY SURVEYING SECTION - COST PLANNING**

Basis of Cost, Risks, Assumptions & Exclusions

1.0 Basis of Costs

- 1.1 Budget based on estimated:
GIAs from architect drawings (issued/latest version: 24th, 25th & 26th June 2024)
 X2301-DD-XX-00-DR-A-00 002 Proposed Site Plan.pdf
 X2301-DD-XX-00-DR-A-70 000 Site Location Plan.pdf
 X2301-DD-XX-00-DR-A-70 001 Existing Site Plan.pdf
 X2301-DD-XX-ZZ-DR-A-10 102 Demolition Plans.pdf
 X2301-DD-XX-ZZ-DR-A-10 103 Proposed Plans.pdf
 X2301-DD-XX-ZZ-DR-A-20 310 Proposed Elevations.pdf
 X2301-DD-XX-ZZ-DR-A-70 101 Existing Plans.pdf
 X2301-DD-XX-ZZ-DR-A-70 300 Existing Elevations.pdf

Structural drawings (issued/latest version: 24th June 2024)
 17131NA - 101 - Basement & Ground Floor Plan.pdf
 17131NA - 102 - First Floor Plan.pdf
 17131NA - 103 - Roof Plan.pdf
 17131NA - Drawing Register and Issue Schedule.pdf
 17131NA - Structural Notes.pdf

Civil engineering drawings
 Unavailable

M&E drawings issued on 24th June 2024
 Mach cost plan Inco pored; no drawing issued at this stage
 Elec cost plan Inco pored; no drawing issued at this stage

Roofing Package
 Accurate Flat Roofing Ltd. quote 14/5/2024, excluding man safe

Asbestos Report
 Refurbishment / demolition survey report unavailable

Other Reports
 TBC
- 1.2 Plans derived from original building survey, and initial structural survey report and are not to scale. Therefore are high level for initial cost plan purposes only.
- 1.3 All dimensions should be checked and confirmed on site
- 1.4 All works to be carried out in accordance with current Codes of Practice and British Standards
- 1.5 GIFA taken from stage 3 planning drawings.
- 2.0 Design Development Risks**
 - 1 Planning constraints
 - 2 Incomplete design stage 4
 - 3 No survey information
 - 4 Client changes - no design freeze/sign off
- 3.0 Construction Risks**
 - 1 Budget deficit/availability of funds
 - 2 Uncertainty surrounding current market, material and labour shortages
 - 3 Asbestos
 - 4 Phased construction
 - 5 Service Diversions
- 4.0 Assumptions**
 - 1 Design stage cost plan to outline the estimated costs for the entire scheme
 - 2 Desktop exercise
 - 3 Estimated works are based priced on current prices with a allowance for Tender Price inflation 2Q 2025
 - 4 Planning stage estimate
 - 5 Change of use applications approved
 - 6 Procured as single stage tender, traditional
 - 7 No conservation issues
 - 8 No sustainable initiatives other than to meet existing regulations
 - 9 No living walls, rain water harvesting or grey water systems
 - 10 Existing furniture and equipment removed by others
 - 11 Assume asbestos present; removal allowance based on cost per m2 estimate while awaiting for a detailed refurbishment/demolition survey.
 - 12 Roof replacement included but will be tendered separately.
 - 13 Window replacement incl.

- 14 Retails / Shop Unit - CAT B
- 15 Restaurant - Shell & Core
- 16 Areas and condition of external works are unknown
- 17 Design and Development Fees fixed
- 18 External works including traffic requirements, hard surfacing and service area.
- 19 M&E costs based on the M&E engineers provision.
- 20 Cost plan consists of two contracts i.e. roof package and main refurbishment package.
- 21 Roofing package cost based on a quotation received 14/5/2024
- 22 Removal of bank safe and disposal by specialists.
- 23 Requirement for DPC for raised area is unknown - shop front.
- 24 Remove existing ramp and replace a new ramp with extended handrail.
- 25 New injection of insulation to cavity wall.
- 26 Making good to retail front existing step
- 27 Stud partition in retail unit
- 28 External service incl. in M&E package
- 29 External drainage allowance based on an estimate

5.0 Exclusions

The following items are specifically excluded from the high level estimate

- 1 VAT
- 2 Firm Architect, Mechanical, Electrical, Structural & Civil Designs
- 3 Site visits
- 4 Site condition & dilapidation surveys
- 5 Planning approval
- 6 Tender Inflation beyond 2Q 2025
- 7 Construction Inflation beyond 2Q 2025
- 8 Costs associated with legal site constraints i.e. wayleaves, covenants, leases, easements, substation legal matters, etc.
- 9 Costs associated with financing, land purchase, legal fees, rights of light, and marketing excluded
- 10 Revenue/Operating costs (rent, rates, service charge, planned preventative maintenance)
- 11 Compensation / costs associated with working on or above land in the possession of others
- 12 Drainage below ground
- 13 Works to basement - details unknown.
- 14 Structural repairs/works to external façade
- 15 Signage
- 16 Furniture, equipment, loose fittings, soft furnishings, etc.
- 17 Internal & external CCTV
- 18 White goods and other appliances
- 19 Extension to the car park
- 20 Bin Stores
- 21 PV Panels
- 22 RAAC implications
- 23 No allowance for M&E units enclosure at roof level and penetration through the roof.
- 24 Entrance canopy

DESIGN AND DELIVERY TEAM, PROPERTY AND INFRASTRUCTURE
QUANTITY SURVEYING SECTION - COST PLANNING

Project : 3 Station Road Flitwick **Date :** 02/07/2024
 Redevelopment
Ref: X2301
Revision: 1.0 **Area:** 447 m2

<u>Element</u>	<u>Cost Centre</u>	<u>Feasibility Estimate</u>	
		<i>Elemental</i>	
		£	£/m2
Building Works	0 Facilitating works	37,995	85.00
	1 Substructure	0	0.00
	2 Superstructure	231,355	517.57
	3 Internal finishes	9,069	20.29
	4 Fittings, furnishings, equip.	0	0.00
	5 Services	204,479	457.45
	6 Complete buildings & units	0	0.00
	7 Works to existing buildings	93,970	210.22
	8 External works	73,536	164.51
	SUB-TOTAL: BUILDING WORKS	650,402	1,455.04
	9 Main contractor's prelims	104,064	232.81
	SUB-TOTAL: BUILDING WORKS	754,467	1,687.85
	10 Main contractor's OH&P	69,260	154.94
TOTAL: BUILDING ESTIMATE		823,727	1,842.79
Project Fees/Cost	11 Project/design team fees	106,082	
	12 Other development costs	26,411	
	TOTAL PROJECT COSTS	132,493	
	BASE COST ESTIMATE	956,220	
Risk	13 Risk Allowance Estimate	95,622	
	COST LIMIT (excluding inflation)	1,051,842	
Inflation	14.1 Tender inflation	37,758	
	14.2 Construction inflation	39,128	
	TOTAL INFLATION ALLOWANCE	76,886	
COST LIMIT		£ 1,128,728	

DESIGN AND DELIVERY TEAM, PROPERTY AND INFRASTRUCTURE QUANTITY SURVEYING SECTION - INDICATIVE BUDGET

Project : 3 Station Road Flitwick Redevelopment **Date :** 02/07/2024

Ref: X2301

Revision: 0

Area: 447 m2

<u>Main Element</u>	<u>Heading</u>	<u>Feasibility Estimate</u>	
		<i>Elemental</i> £	£/m2
Facilitating Works	0.1 Toxic/hazardous/contaminated material treatment	37,995	85.00
	0.2 Major demolition work	0	0.00
	0.3 Temporary support for adj structures	0	0.00
	0.4 Specialist groundworks	0	0.00
	0.5 Temporary diversion works	0	0.00
	0.6 Extraordinary site investigation	0	0.00
Substructure	1.1 Foundations	0	0.00
	1.2 Basement excavation	0	0.00
	1.3 Basement retaining wall	0	0.00
	1.4 Ground floor construction	0	0.00
Superstructure	2.1 Frame	0	0.00
	2.2 Upper floors	0	0.00
Internal Finishes	2.3 Roof	128,921	288.41
	2.4 Stairs and ramps	5,000	11.19
	2.5 External walls	0	0.00
	2.6 Windows and external doors	80,622	180.36
	2.7 Internal walls and partitions	4,212	9.42
	2.8 Internal doors	12,600	28.19
	3.1 Wall finishes	1,085	2.43
	3.2 Floor finishes	4,616	10.33
	3.3 Ceiling finishes	3,368	7.53
Fittings	4.1 General fittings & furnishings	0	0.00
	4.2 Special fittings & furnishings	0	0.00
	4.3 Internal planting	0	0.00
	4.4 Bird and vermin control	0	0.00
Services	5.1 Mech service	93,500.00	209.17
	5.2 Elec services - Retail	94,301	210.96
Complete Buildings Works to Existing	5.3 Elec services - Restaurant	16,678	37.31
	5.1 Sanitary appliances	0	0.00
	5.2 Services equipment	0	0.00
	5.3 Disposal installations	0	0.00
	5.4 Water installations	0	0.00
	5.5 Heat source	0	0.00
	5.6 Space heating & air-con	0	0.00
	5.7 Ventilation systems	0	0.00
	5.8 Electrical installations	0	0.00
	5.9 Gas & other fuel installations	0	0.00
	5.10 Lift & conveyor installations	0	0.00
	5.11 Fire & lightning protection	0	0.00
	5.12 Communication & security	0	0.00
	5.13 Specialist installations	0	0.00
	5.14 Builder's work in connection	0	0.00
	5.15 Testing & commissioning	0	0.00
External Works	6.1 Prefabricated buildings	0	0.00
	7.1 Minor demolition & alteration	82,070	183.60
	7.2 Repairs to existing services	0	0.00
	7.3 DPC/fungus eradication	5,000	11.19
	7.4 Façade retention	3,000	6.71
	7.5 Cleaning existing surfaces	0	0.00
External Works	7.6 Renovation works	3,900	8.72
	8.1 Site preparation works	0	0.00
	8.2 Roads, paths & pavings	44,163	98.80
	8.3 Planting	2,693	6.02
	8.4 Fencing, railings & walls	6,680	14.94
	8.5 Site/street furniture	5,000	11.19
	8.6 External drainage	15,000	33.56
	8.7 External services	0	0.00
	8.8 Minor building works	0	0.00

SUB-TOTAL: BUILDING WORKS	650,402	1,370.04
---------------------------	---------	----------

Preliminaries	9.1	Employer's requirements	1%	6,504	
	9.2	Main contractor's cost items	15%	97,560	
SUB-TOTAL: BUILDING WORKS				754,467	2,740.08
Overhead & Profit	10.1	Main contractor's overheads	3.00%	22,634	
	10.2	Main contractor's profit	6.00%	46,626	
TOTAL: BUILDING ESTIMATE				823,727	1,842.79
Design Team Fees	11.1	Consultants' fees	Fixed fee	106,082	
	11.2	Main contractor's fees	NA	0	
	11.3	Main contractor's design fees	NA	0	
SUB-TOTAL: PROJECT COSTS				106,082	
Other Project Costs	12.1	Other project costs - X2301-DD-XX-XX-ES-PM-001-A-Non-Construction Costs		26,411	
	SUB-TOTAL: PROJECT COSTS				26,411
BASE COST ESTIMATE				956,220	
Risk	13.1	Design development risks	3%	28,687	
	13.2	Construction risks	3%	28,687	
	13.3	Employer change risks	2%	19,124	
	13.4	Employer other risks	2%	19,124	
SUB-TOTAL: RISK ALLOWANCE				95,622	
COST LIMIT (excl inflation)				1,051,842	
Inflation	14.1	Tender Inflation	3.59%	37,758	
	14.2	Construction Inflation	3.72%	39,128	
SUB-TOTAL: INFLATION ALLOWANCE				76,886	
COST LIMIT			£	1,128,728	

Project Strategy Report



Strategy Report	
Prepared By: Paulina A. Danielewicz	Date of Report: 01/07/2024
Date report requires approval by: 03/07/2024	Procurement Manager/Officer: TBC
Project number: X2301	Client/Budget holder: Flitwick Town Council
Project name: X2301 3 Station Road Flitwick	
Service Lead: Luis Cadete	Project Manager: Paulina A. Danielewicz
Contract Budget: £1,050,599	Proposed New Contract Term: until June 2025
Is this a Services/Works/Goods procurement? Works	What CPV Codes are applicable to this procurement? 45210000
Existing arrangements	
What are the existing arrangements? N/A	Length of expiring contract: N/A
Date of expiry of existing arrangement: N/A	DN Number of expired existing arrangement: N/A
<h2>1. Introduction & Background</h2> <p>The strategy report supports a proposed conversion of single use bank property to provide a restaurant and a retail with potential post office.</p> <p>The restaurant is proposed to be located in the two-storey part of the building and the retail will be located in the single storey section. The restaurant shell would be prepared for the future tenant to make it to their own requirements and the retail unit should be completed with all finishes for the tenant to start operating immediately.</p> <p>The scheme will include the external works with elevations' improvement, some minor service yard works and ramps and steps providing the access to both units.</p> <p>In addition, there will be roof works which will be completed as enabling works.</p> <p>Flitwick Town Council will fund the capital allowance for construction, professional fees, planning/building control & surveys fees, and Principal Designer fee. The project will be partly funded form DLUHC COF Funding.</p>	

The service requires a Principal Contractor to deliver and complete the works under a JCT 2016 Intermediate Building Contract 2016.

The site is owned by Flitwick Town Council, the building will be leased to two separate tenants.

2. Considerations

This procurement event is managed by the Design and Delivery Team on behalf of the Client Flitwick Town Council. There are two key strands which need to be considered:

- Strategic:
 - Ensuring compliance with Public Contracts Regulations 2015
 - Manage procurement portal process.
- Technical:
 - All technical aspects required to deliver the procurement including:
 - Full Tender Documentation including Prelims; ITT; Criteria; JCT 2016 Intermediate Building Contract 2016.
 - Site Plans, drawings, specifications & surveys

Targets and priorities identified by the project team include:

- Compliant PCR 2015 process delivered.
- The completion of construction of the building
- Develop Main Contractor relationships works associated with Flitwick Town Council with local SME businesses where possible.
- Ensure project aligns with and meet the Flitwick Town Council requirements.
- Ensure Social Value outcomes are delivered.
- Ensure robust contract management is undertaken by LBC.

The Agreement will be signed by two authorised signatories at Flitwick Town Council (Stephanie Stanley Deputy Town Clerk & RFO and Stacie Lockey Town Clerk & Chief Executive) the Contracts will be signed under seal by the relevant Corporate Director.

Budget was confirmed by Stephanie Stanley on the 28/05/2024 which has been saved in projects folder.

2.1 Legal Support

Contract type: JCT 2016 Intermediate Building Contract 2016
Legal Team: LBC

LBC will be responsible for the contract sign off.

2.2 TUPE

Not Applicable – not required for construction projects.

2.3 Real living wage

It is an aspiration of the Council's that all contracted providers pay the real living wage, whilst this may not always be achievable it is something that will be detailed within the documents.

3. Market Assessment

Our view of the market

Current indications of the construction market for retail and restaurant projects shows there have been slow to bounce back from the pandemic.

Based on the current data from Glenigan Construction Industry Forecast June 2024-2026 the retail sector is expected to see a gradual recovery driven by brighter economic and improving customer spending.

Based on the same forecast a gradual rise in household income is expected to fuel growth in discretionary spending on hospitality over next 3 years.

The forecast in demand in the retail sector for work during 2024 will be up by 5% from the year 2023, with further 3% in 2025 and 19% in 2026. In leisure sector the expected growth is 14% in 2024, with further 6% in 2025 and 7% in 2026.

Project Strategy Report

	<p>With the positive highlighted there are still issues in supply of quality of labour and materials still affecting the market. The desire for Main Contractor to utilise local sub-contractors is a valued aspiration that, due to supply within qualified trades, may not be delivered with consistency throughout the construction process. In practice, it could put some Main Contractors off not having the incentive of a visible future pipeline demonstrating some longevity of these new relationships and the basis of desire to retain localised skilled labour.</p> <p>Whilst larger national Main Contractors may show interest, there could also be some interest amongst smaller/medium contractors and looking to diversify as a result of constraints in other markets.</p> <p>This market is currently impacted by high volatility within areas of the supply chain including qualified labour and materials which are outside of their control. Whilst labour markets are struggling for high skilled roles (e.g. Crane/Machine operators, brick layers, etc.) there are also forces heavily inflating price and lead times for materials.</p> <p>Note that the risks and issues on labour and materials will apply whatever route to market is selected, and that the appetite of bidders is influenced by the availability of other contracting opportunities as well.</p>
The markets view of the authority	<p>As this project is of a small/medium nature, the supply chain should be able to manage risks and build out effectively with few issues arising.</p> <p>The potential for high/medium expressions or realistic intent to bid is reasonable – based on the fact this site is straightforward with no issues, that said there are other factors that might limit interest.</p> <p>The contractor seeks the best labour at competitive rate and the challenges of recruitment and retention of localised labour, localised materials and localised specialists suppliers may impact heavily on the price to market.</p> <p>Whether or not we attract sufficient contractors submitting acceptable bids, that meet the criteria of affordability/quality/social value set for the proposed development, is a risk.</p>

Project Strategy Report

The Social Value may create tensions within main contractors supply chains, this carries a risk that bidders could price for issues arising from those perceived risks.

4. Risks

Risks	Mitigation	Risk Owner
Insufficient interest in renting both units	Working closely with the agents to market the site and engage with possible tenants.	Client
Project budget	A detailed cost plan has been completed by the design team to establish outline cost for the client to ensure budgets are available to proceed with the project. PDDT will manage the build to control costs and reduce risk of exceeding project budget. Major variances to be reported back and agreement on how to manage those sought from relevant persons. Ensure funds are available for project including contingency due to the duration of the build.	Client – and PDDT on cost control within the build.
Market pressures	Surge in construction work is high, timing of going to tender early is critical to avoid delays and to provide sufficient time scales for the construction of the project. Essential project plan is realistic with sufficient contingency slippage allowed whilst also keeping on track.	Client – and PDDT on project management within the build
Award time – the contract must be awarded by November 2024 to avoid losing COF funding.	Procurement and service has set out a timeline and monitoring process and progress	Client – and PDDT on project management within the build

Although the overall risk to this project at this stage is minimal it is important to manage within the allocated budget and a contingency sum will be built into the cost plan to mitigate risks during the build and hold the contractor to time. Liquidated damages within the contract will also mitigate project issues.

5. Options Appraisal

Project Strategy Report

Option	Advantages	Disadvantages
Do nothing	None	Risk of not progressing the project. Reputational damage as a result in not creating new retail and restaurant for the community.
Go to full FTS procurement	Can align fully to Council needs Protects against risk of breaching threshold limit The Council can buy into any innovative solutions/ideas the current market can present	Cost of additional resources. However, it tests the market to see if this sort of opportunity/value has any market attraction. Risk of too many small contractors bidding for the work, risking the specialist contractors not wanting to tender.
Use the Framework	Less resource intensive - but full suite of technical documents and contract required. More suitable Contractors to tender for project.	The Framework may not fully meet the Council's requirements. Unable to engage local business in the tender process and may exclude some of the local providers.

6. Recommendation for Approval

Based on the evaluation undertaken as shown above the most viable option to deliver this project is to use a full FTS procurement.

7. Evaluation

The procurement for development is a single stage process.

The economic and financial standing portion will be reviewed by Flitwick Town Council's Finance team against set minimal performance criteria.

The tender evaluation proposed for the project is as follows:

- 20% Social Value
- 30% Quality
- 50% Price

In the Quality evaluation there is an (M) after the 'weighting score', and it indicates that there is also a 'minimum threshold to that question and suppliers will be rejected if they do not meet a minimum requirement threshold. The minimum threshold is 50% and if, for example, the total number of points is 50 and a score of 24 or below is awarded, this will lead to the rejection of the tender in its entirety. No minimum score will be applied to the Social Value question due to the short-term nature of the build, but suppliers will be signposted clearly on expectations of benefits to local communities and residents.

The detailed social value and quality questions will be provided to Flitwick Town Council prior tender for review and approval.

Using the FTC procurement allows the PDDT to run the tender via the councils approved procurement portal (Proactis) which allows us to procure the project in conjunction with Luton council procedures.

The evaluation panel TBC.

8. Benefits

Social Value benefits are unknowns at this time as they depend on the bidder's offer but a number of organisations local to the site could benefit and a high level of importance will be attached to both local economy, community and net zero.

The ITT documents requests that bidders submit proposals for value engineered savings.

All other benefits are associated with the delivery of the actual development itself.

9. Social Value

Flitwick Town Council Social Value policy requires we apply a 20% weighting of the total evaluation criteria.

It is felt that Social Value weighting effectively delivers a higher importance to this criteria than other more critical aspects of the delivery of the contract and that this may impact an optimal outcome. However, no alternative proposal has been made with cogent rationale and as such this will remain.

10. Current position

The site is currently vacant no works have been carried out on site. A planning application documents has been completed and will be issued to Flitwick Town Council for approval by 04/07/2024 and submitted to the planners by 18/07/2024. A cost plan for the project has

been prepared and will be issued by 04/07/2024. Work to RIBA Stage 4 tender documents have commenced. The PCI document is in progress and will be issued prior tender.

Work yet still to be completed.

- Specification
- Pricing Document
- ITT
- Pricing Document
- Sign off of Strategy Report by service
- Quality Questions, including SV
- Upload of documents to the portal for tender
- JCT Contract

11. Proposed Estimated Timeline

Action	Deadline
Sign off of specification	27/08/2024
Sign off of evaluation (including evaluation matrix, contract, quality questions and pricing schedule)	27/08/2024
Contractor Engagement	26/07/2024
Publish ITT	04/09/2024
Deadline for clarification questions	25/09/2024
Deadline for bidder submission	02/10/2024
Scoring period (individual and moderation)	07/11/2024
Contract Award Report Sign off	15/11/2024
Outcome letters sent – commence standstill (if applicable)	29/11/2024
Contract award	15/11/2024
Upload FTS/Contracts Finder Award Notice	29/11/2024
Mobilisation (If applicable)	15/01/2025
Contract go live	13/12/2024 as demolition works will start in advance

Project Strategy Report



12. Comments and Approval

Department	Comments	Officer Name	Officer Signature	Approve/Reject
Client agent (P&I)		Roger Kirk		
Project Design & Delivery Manager (P&D)		Luis Cadete		
Flitwick Town Council		Stephanie Stanley		
Flitwick Town Council		Stacie Lockey		

Detail Drawings

Project: 50214

Project Name: Station Road 3

Project Address: Station House, Flitwick Railway Station
Steppingley Road
Flitwick
Bedford
Bedfordshire
MK45 1AJ

Client:

Client Details: Luton Borough Council

Produced by:

Author Address: Adam Anderson
Langley Waterproofing Systems Limited
Langley House
Lamport Drive
Heartlands Business Park
Daventry
Northants
NN11 8YH

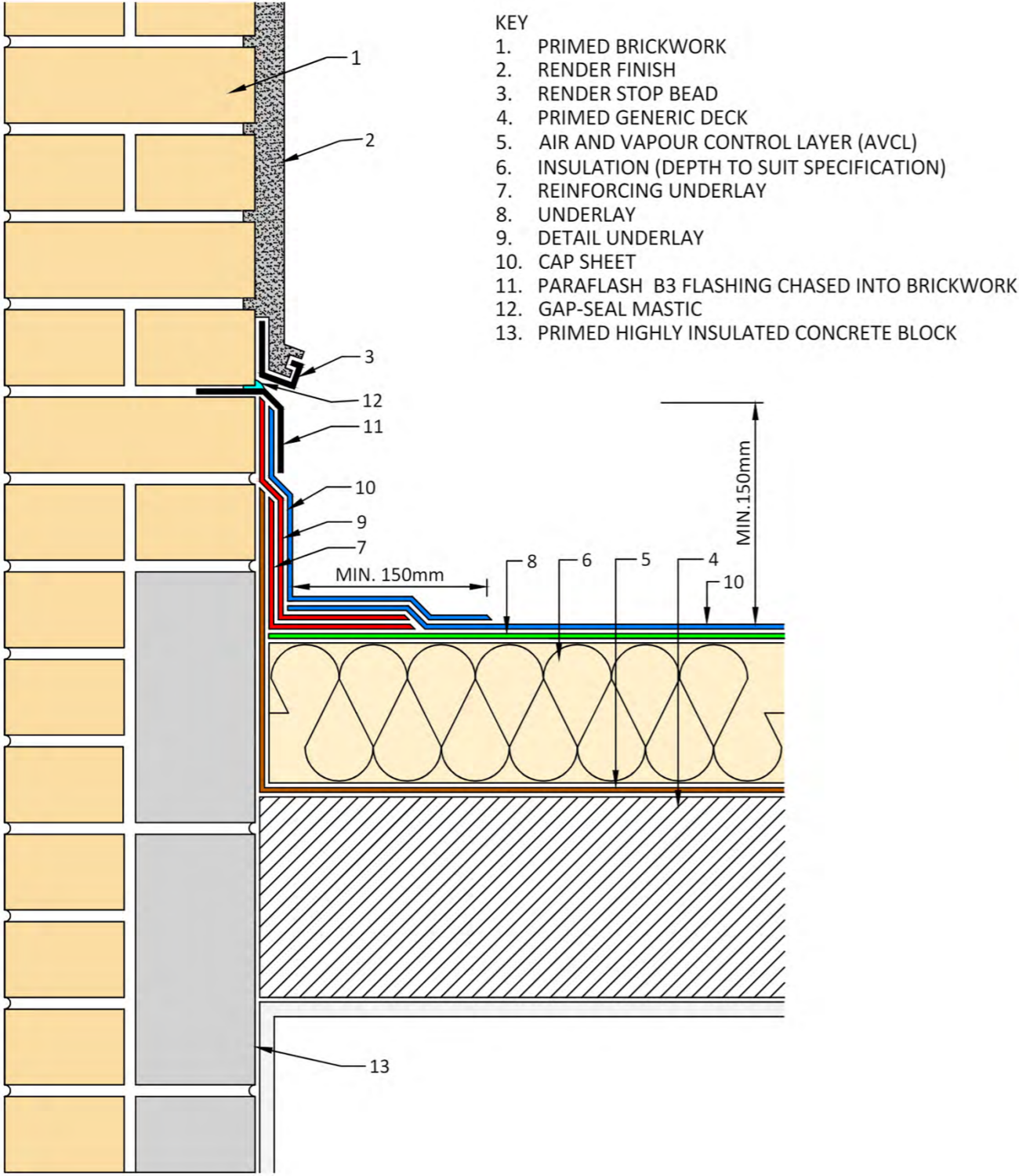
Telephone: 01327 708990

Mobile: 07342 035415

Email: a.anderson@langley.co.uk

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SECTION THROUGH DETAIL



3D CUTAWAY MODEL

NOTE:

DETAIL DRAWING IS INDICATIVE ONLY IS FOR GUIDANCE PURPOSES ONLY.
SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: RBM-W-105-V03122019-SKIRTING TO RENDER

CLIENT: Luton Borough Council

DRG REF: RBM-W-105-V03122019-SKIRTING TO RENDER

ROOF: Roof Area 01

REV: 1

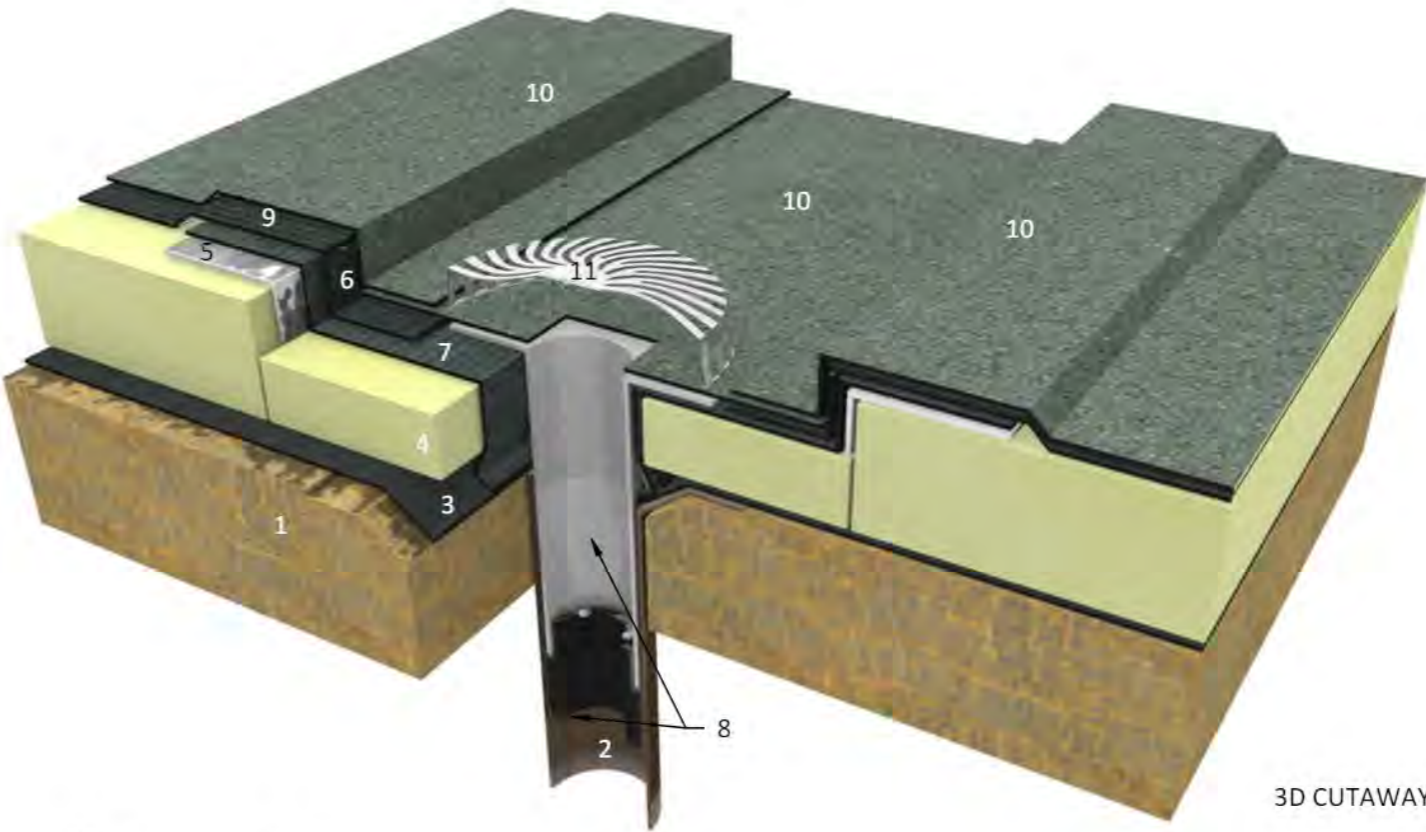
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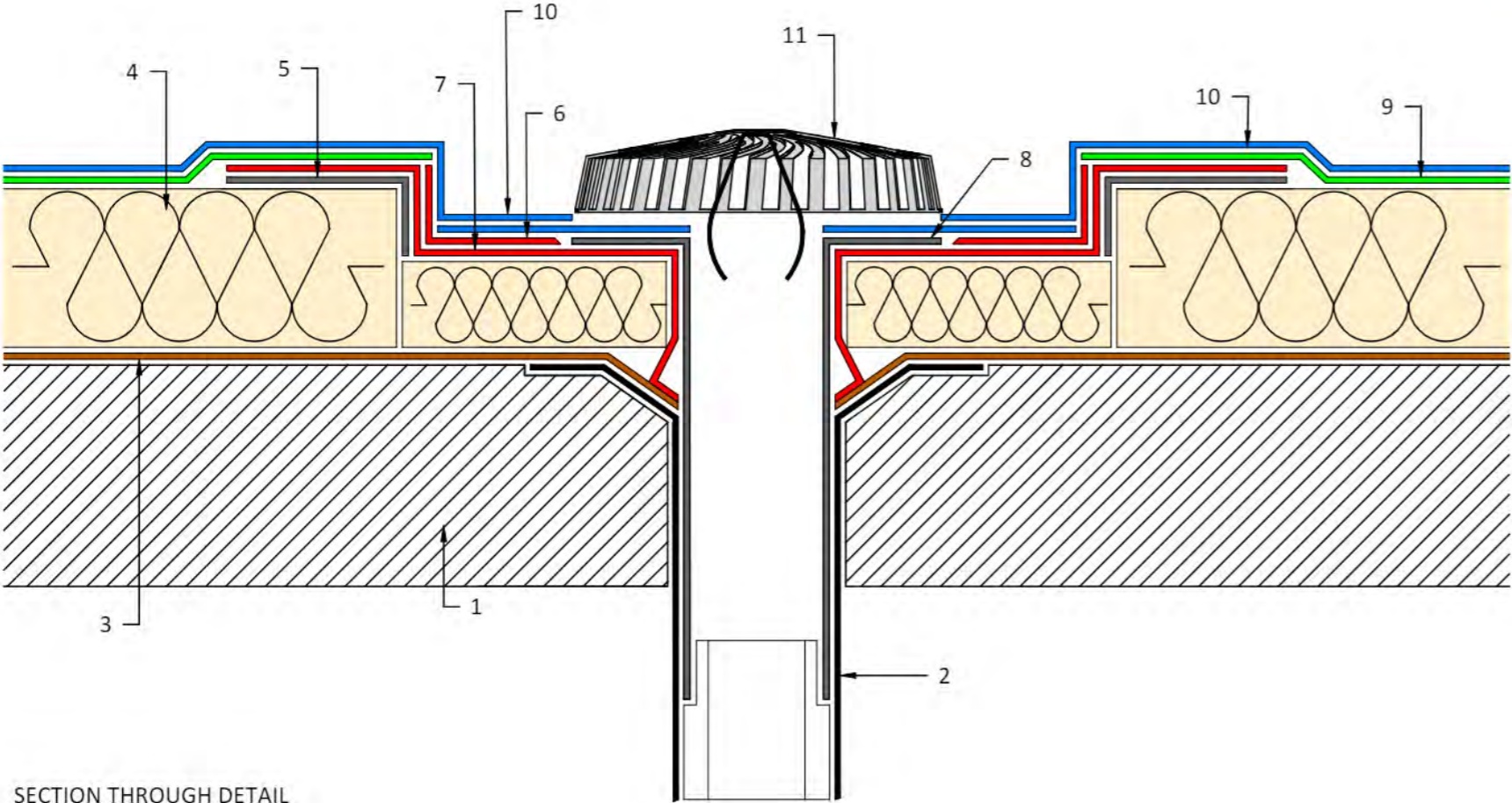


KEY

- 1. PRIMED GENERIC DECK
- 2. EXISTING OUTLET
- 3. AIR AND VAPOUR CONTROL LAYER (AVCL)
- 4. INSULATION (DEPTH TO SUIT SPECIFICATION)
- 5. PRIMED METAL HARD EDGE
- 6. REINFORCING UNDERLAY
- 7. DETAIL UNDERLAY
- 8. PARAFURB OUTLET AND ADJUSTABLE BUNG
- 9. UNDERLAY
- 10. CAP SHEET
- 11. TURBINE LEAF GUARD



3D CUTAWAY MODEL



SECTION THROUGH DETAIL

NOTE:

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SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: RBM-W-405-V05082021-REFURB OUTLET

CLIENT: Luton Borough Council

DRG REF: RBM-W-405-V05082021-REFURB OUTLET

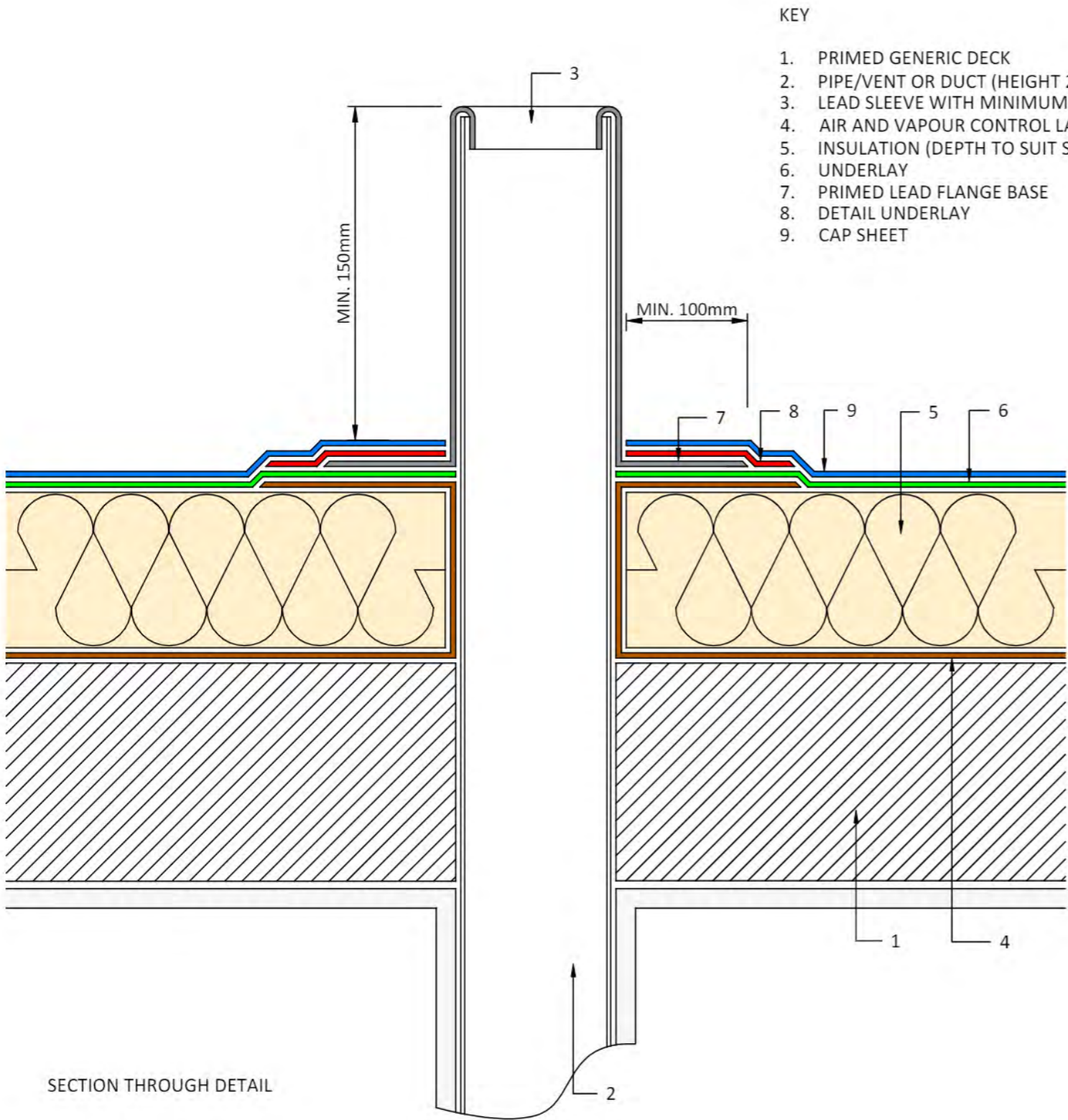
ROOF: Roof Area 01, Roof Area 02 & 03

REV: 1

DATE: 27/06/2024

SCALE: NTS





- KEY
1. PRIMED GENERIC DECK
 2. PIPE/VENT OR DUCT (HEIGHT 200mm MAX.)
 3. LEAD SLEEVE WITH MINIMUM 25mm TURN DOWN
 4. AIR AND VAPOUR CONTROL LAYER (AVCL)
 5. INSULATION (DEPTH TO SUIT SPECIFICATION)
 6. UNDERLAY
 7. PRIMED LEAD FLANGE BASE
 8. DETAIL UNDERLAY
 9. CAP SHEET



NOTE:
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SPECIFICATION TO TAKE PRECEDENCE
OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: RBM-W-501-V03122019-SVP

CLIENT: Luton Borough Council

DRG REF: RBM-W-501-V03122019-SVP

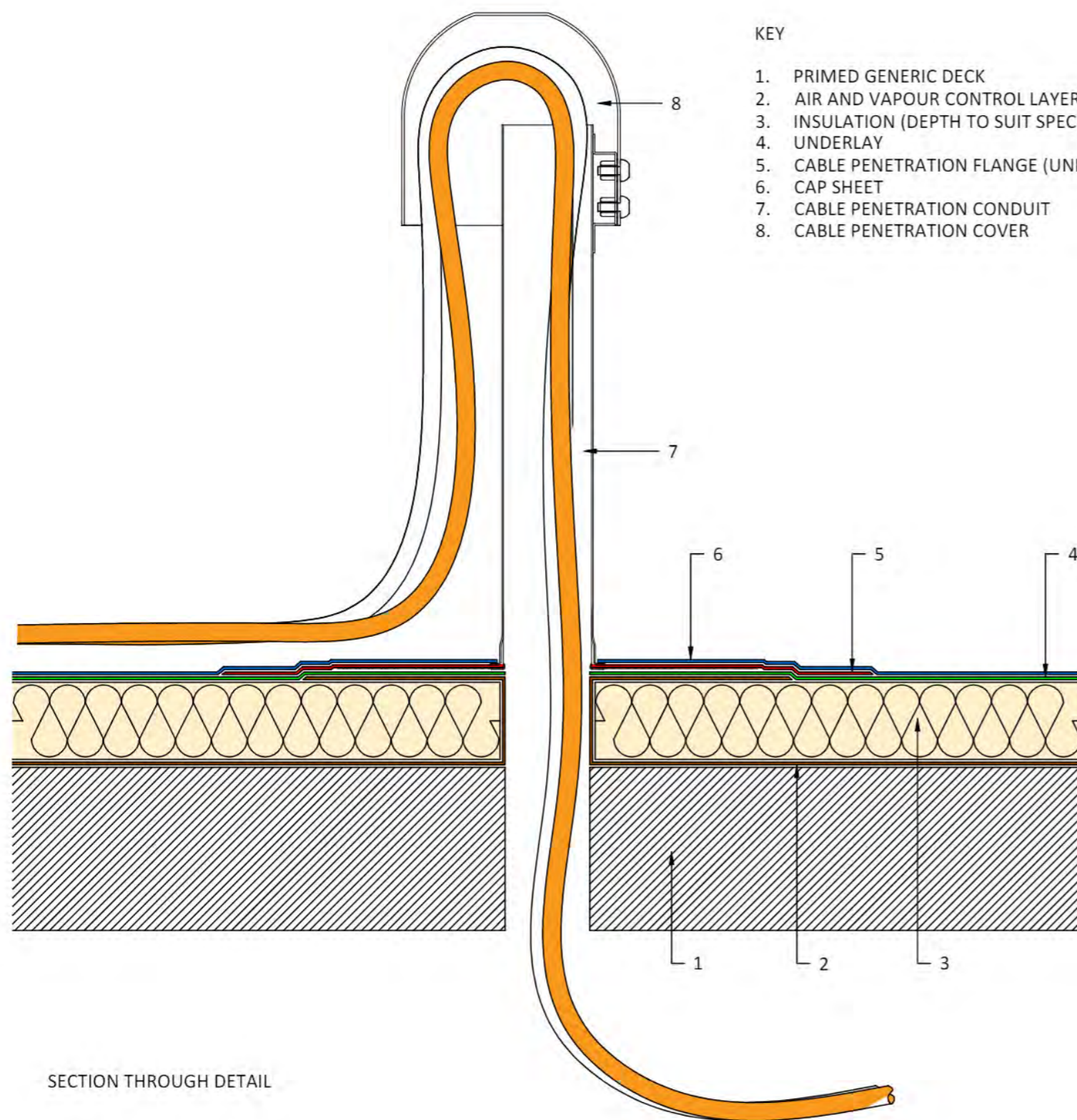
ROOF: Roof Area 02 & 03

REV: 1

DATE: 27/06/2024

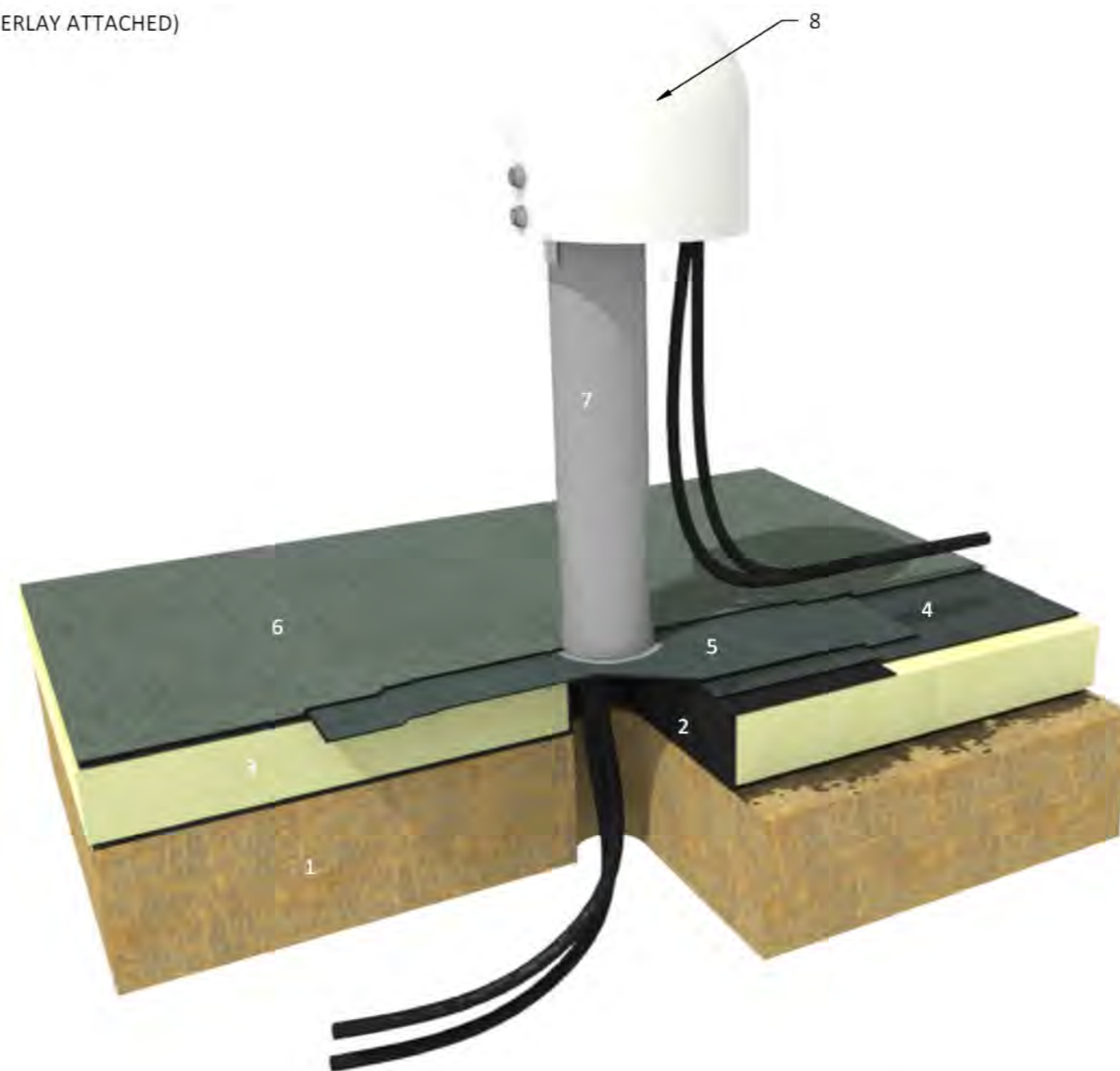
SCALE: NTS





SECTION THROUGH DETAIL

- KEY
1. PRIMED GENERIC DECK
 2. AIR AND VAPOUR CONTROL LAYER (AVCL)
 3. INSULATION (DEPTH TO SUIT SPECIFICATION)
 4. UNDERLAY
 5. CABLE PENETRATION FLANGE (UNDERLAY ATTACHED)
 6. CAP SHEET
 7. CABLE PENETRATION CONDUIT
 8. CABLE PENETRATION COVER



3D CUTAWAY MODEL

NOTE:

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SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: RBM-W-504-V03122019-J CONDUIT

CLIENT: Luton Borough Council

DRG REF: RBM-W-504-V03122019-J CONDUIT

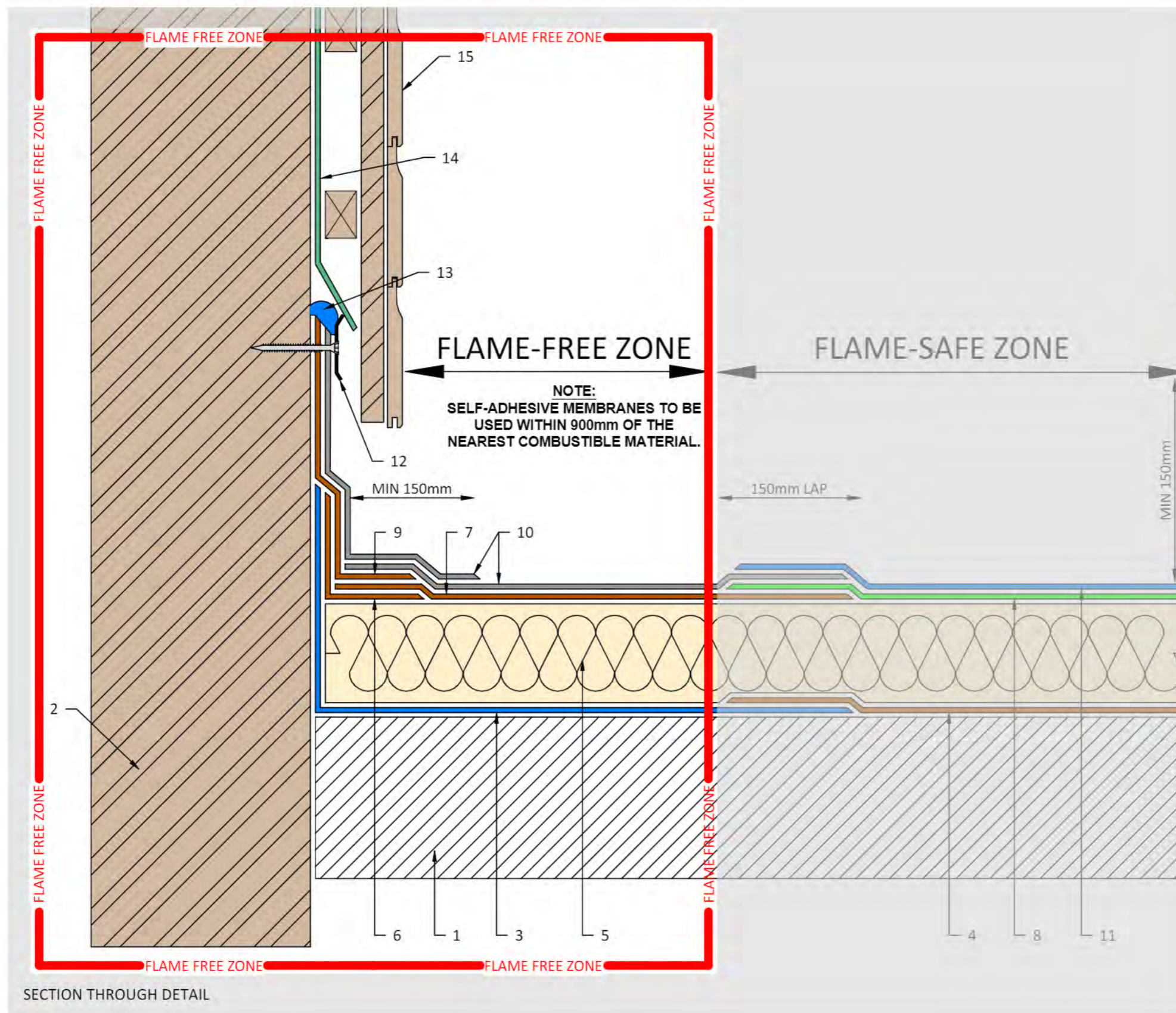
ROOF: Roof Area 02 & 03

REV: 1

DATE: 27/06/2024

SCALE: NTS





KEY

1. PRIMED GENERIC DECK
2. PRIMED GENERIC COMBUSTABLE MATERIAL
3. SA AIR AND VAPOUR CONTROL LAYER (AVCL)
4. AIR AND VAPOUR CONTROL LAYER (AVCL)
5. PRIMED INSULATION (DEPTH TO SUIT SPECIFICATION)
6. SA REINFORCING UNDERLAY
7. SA UNDERLAY
8. UNDERLAY
9. SA DETAIL UNDERLAY
10. SA CAP SHEET
11. CAP SHEET
12. TERMINATION BAR
13. GAP SEAL MASTIC
14. BREATHABLE MEMBRANE
15. CLADDING

NOTE:

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SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: S2T-W-112-V25092023-OVERCLAD RAINSCREEN DETAIL

CLIENT: Luton Borough Council

DRG REF: S2T-W-112-V25092023

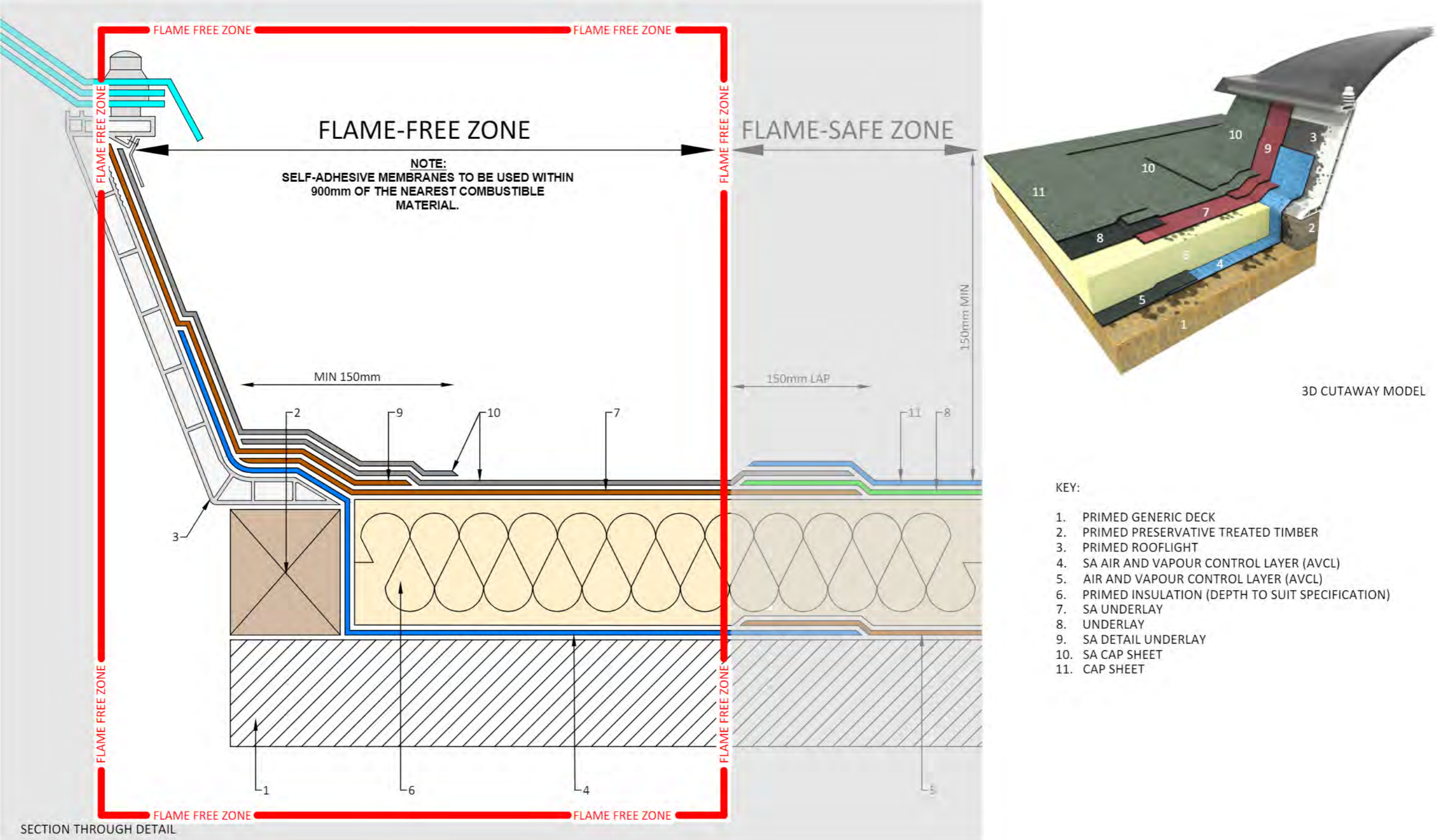
ROOF: Roof Area 02 & 03

REV: 1

DATE: 27/06/2024

SCALE: NTS





NOTE:

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GUIDANCE PURPOSES ONLY.

SPECIFICATION TO TAKE PRECEDENCE
OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: S2T-W-601-V25092023-PARKERB ROOFLIGHT DETAIL

CLIENT: Luton Borough Council

DRG REF: S2T-W-601-V25092023

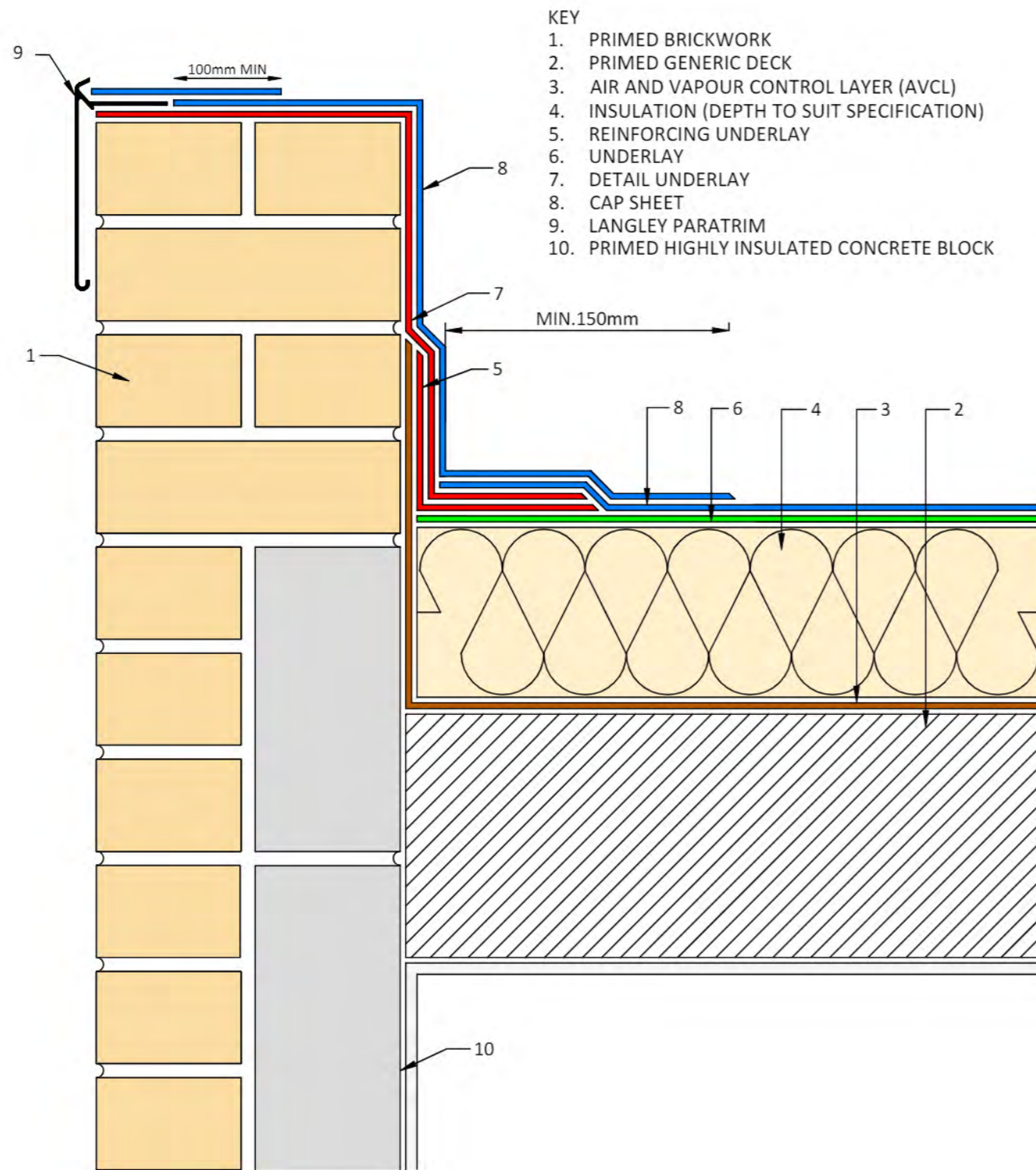
ROOF: Roof Area 02 & 03

REV: 1

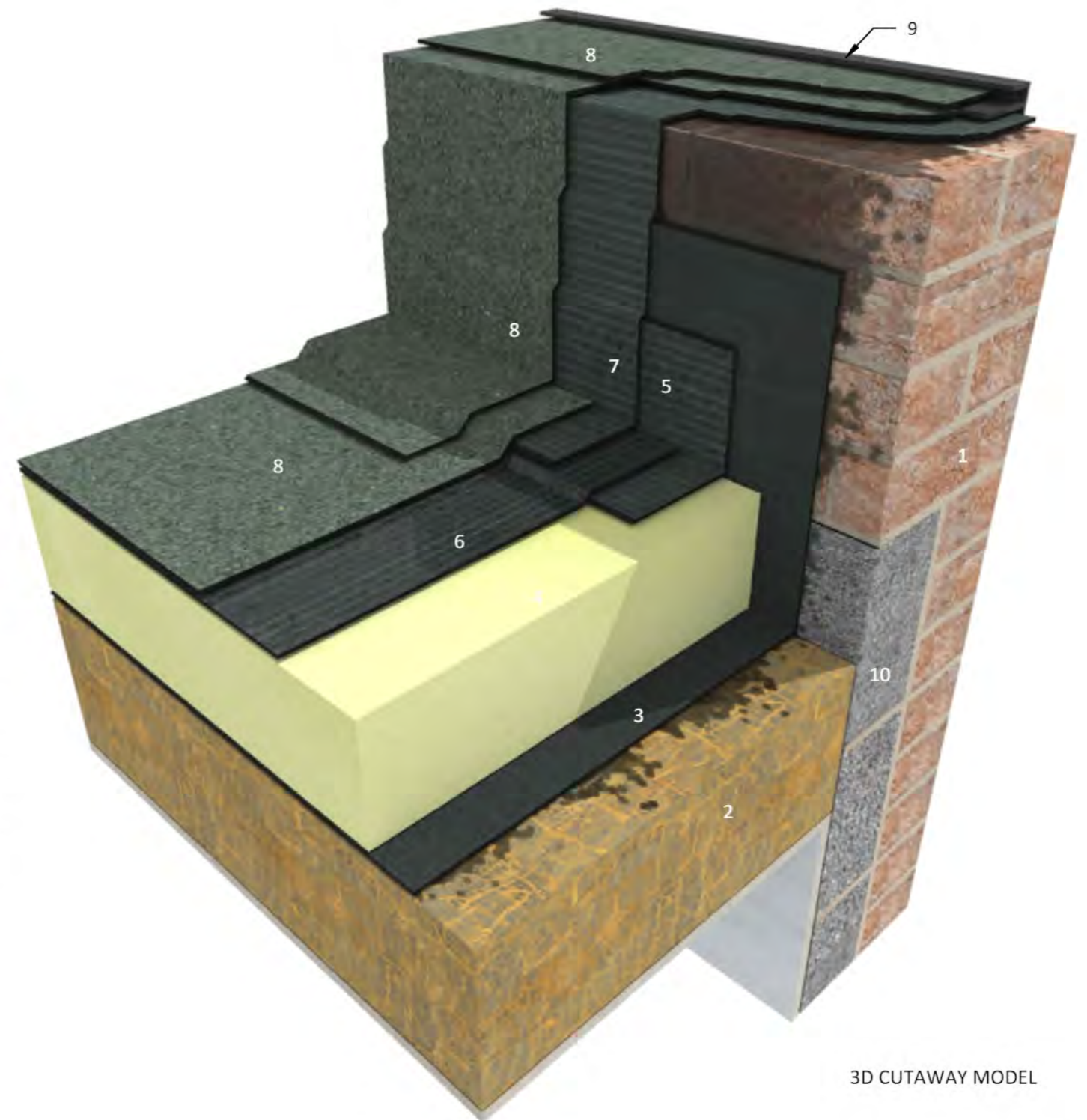
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SCALE: NTS





SECTION THROUGH DETAIL



3D CUTAWAY MODEL

NOTE:

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SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: RBM-W-201-V03122019-PARAPET-GRP TRIM

CLIENT: Luton Borough Council

DRG REF: RBM-W-201-V03122019-PARAPET-GRP TRIM

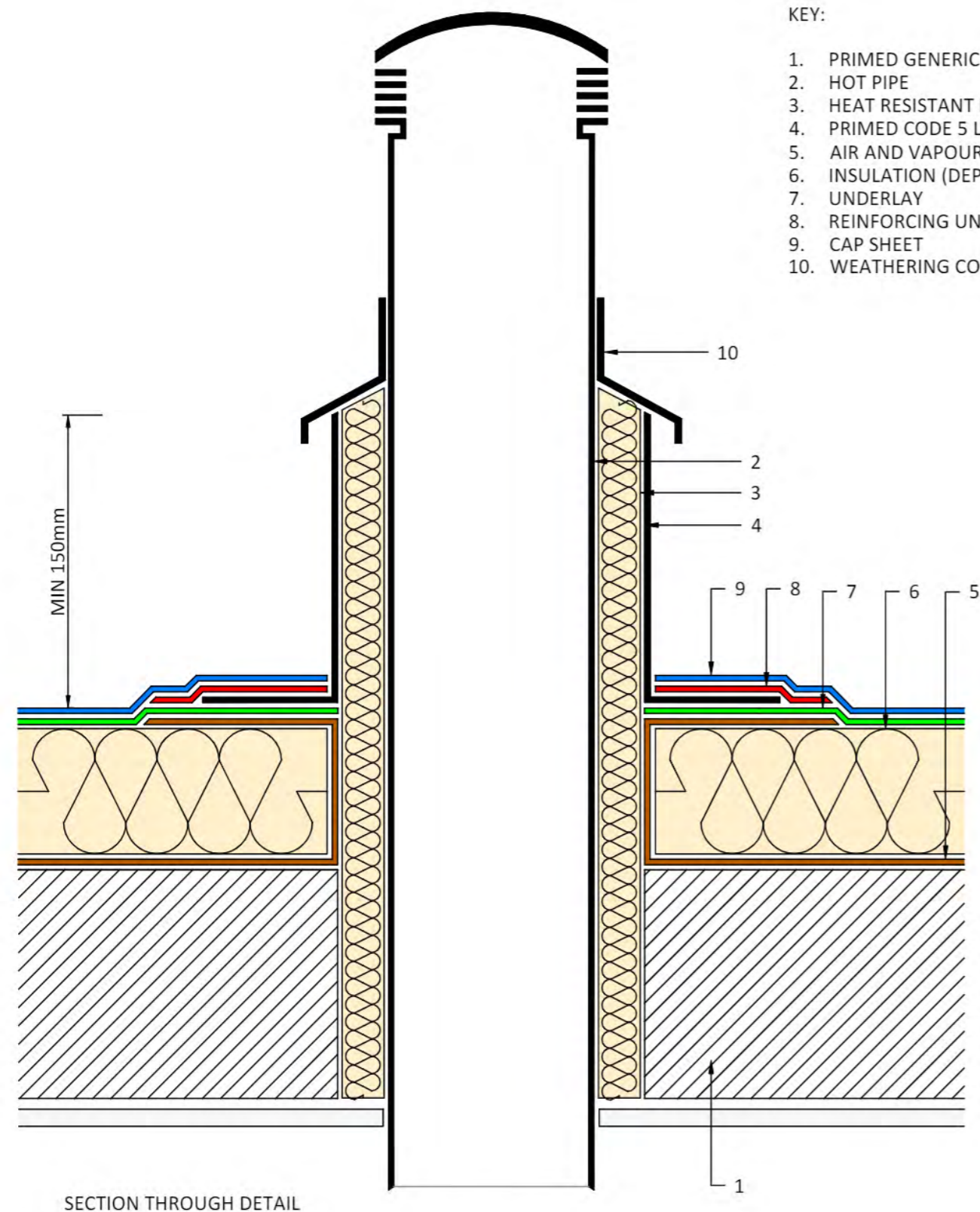
ROOF: Roof Area 01

REV: 1

DATE: 27/06/2024

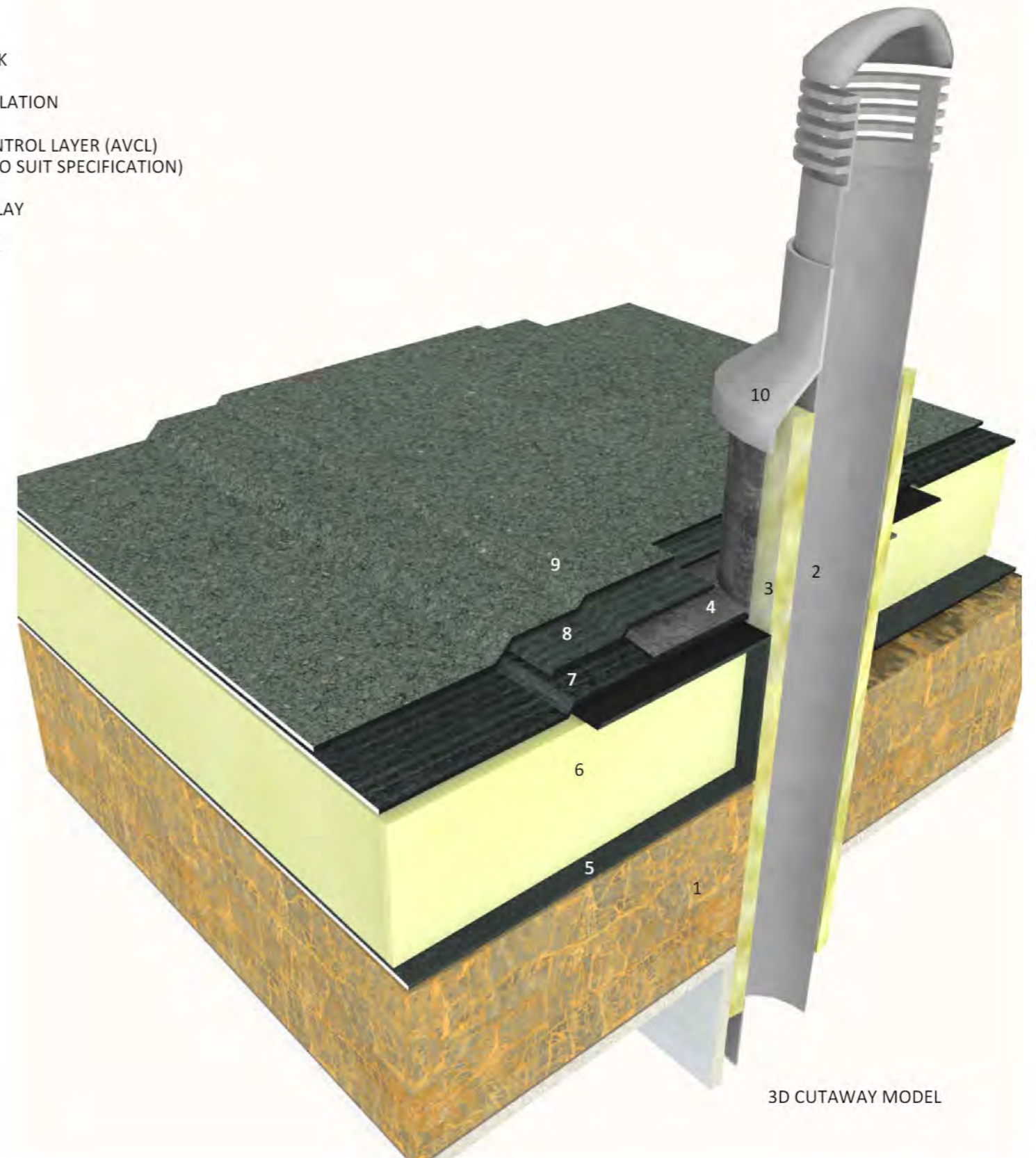
SCALE: NTS





KEY:

1. PRIMED GENERIC DECK
2. HOT PIPE
3. HEAT RESISTANT INSULATION
4. PRIMED CODE 5 LEAD
5. AIR AND VAPOUR CONTROL LAYER (AVCL)
6. INSULATION (DEPTH TO SUIT SPECIFICATION)
7. UNDERLAY
8. REINFORCING UNDERLAY
9. CAP SHEET
10. WEATHERING COLLAR



NOTE:

DETAIL DRAWING IS INDICATIVE ONLY IS FOR GUIDANCE PURPOSES ONLY.

SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: RBM-W-513-V03122019-HOT PIPE

CLIENT: Luton Borough Council

DRG REF: RBM-W-513-V03122019-HOT PIPE

ROOF: Roof Area 01, Roof Area 02 & 03

REV: 1

DATE: 27/06/2024

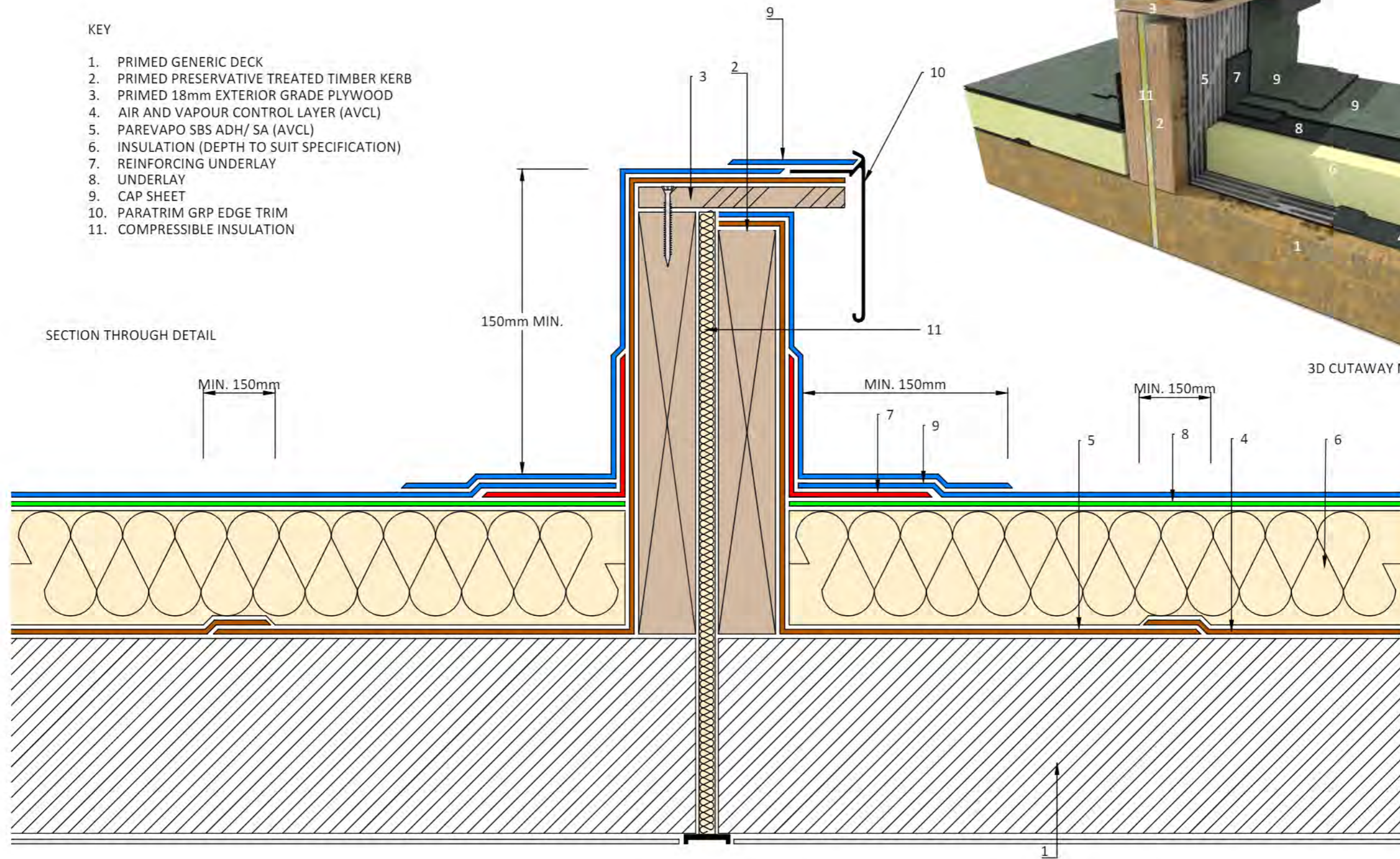
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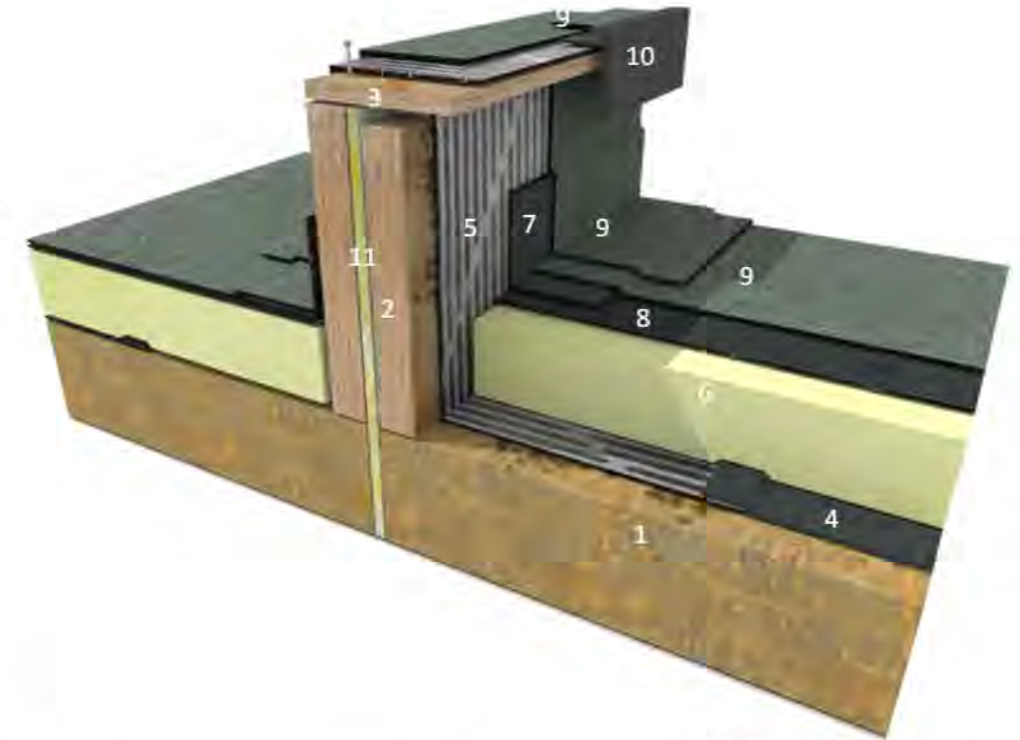
KEY

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2. PRIMED PRESERVATIVE TREATED TIMBER KERB
3. PRIMED 18mm EXTERIOR GRADE PLYWOOD
4. AIR AND VAPOUR CONTROL LAYER (AVCL)
5. PAREVAPO SBS ADH/ SA (AVCL)
6. INSULATION (DEPTH TO SUIT SPECIFICATION)
7. REINFORCING UNDERLAY
8. UNDERLAY
9. CAP SHEET
10. PARATRIM GRP EDGE TRIM
11. COMPRESSIBLE INSULATION

SECTION THROUGH DETAIL



3D CUTAWAY MODEL



NOTE:

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SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: S2TR-W-707-V26102023-EXPANSION JOINT-TWIN KERB DETAIL

CLIENT: Luton Borough Council

DRG REF: S2TR-W-707-V26102023

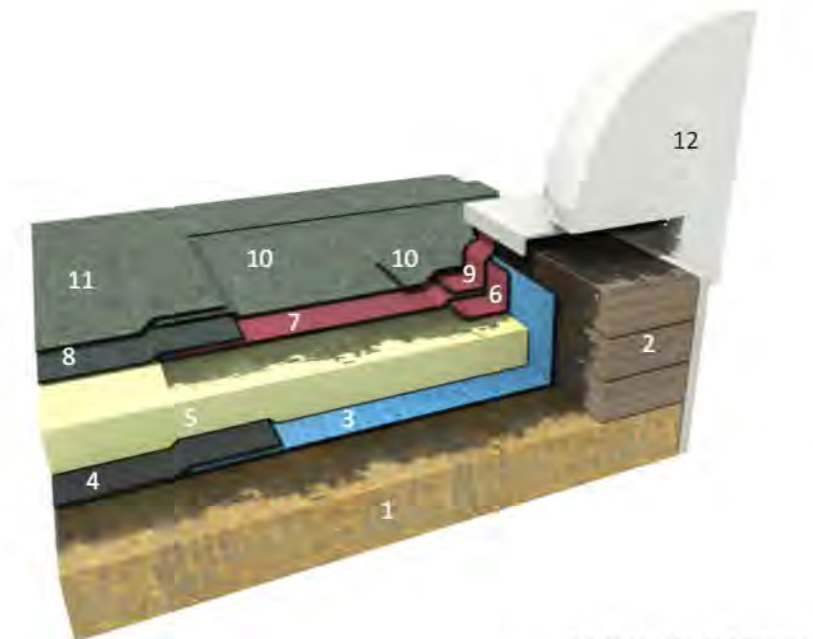
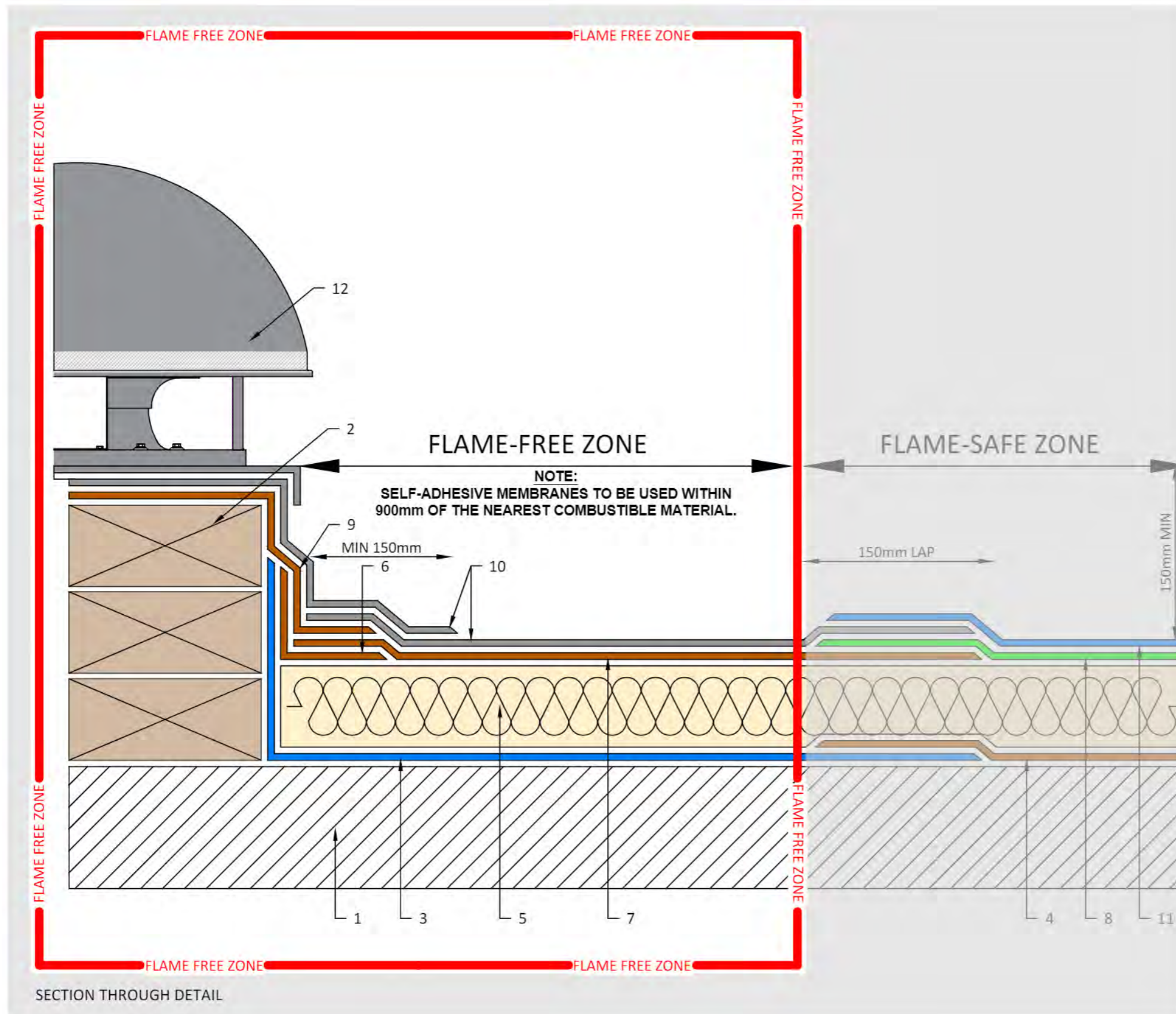
ROOF: Roof Area 02 & 03

REV: 1

DATE: 27/06/2024

SCALE: NTS





3D CUTAWAY MODEL

KEY

1. PRIMED GENERIC DECK
2. PRIMED PRESERVATIVE TREATED TIMBER
3. SA AIR AND VAPOUR CONTROL LAYER (AVCL)
4. AIR AND VAPOUR CONTROL LAYER (AVCL)
5. PRIMED INSULATION (DEPTH TO SUIT SPECIFICATION)
6. SA REINFORCING UNDERLAY
7. SA UNDERLAY
8. UNDERLAY
9. SA DETAIL UNDERLAY
10. SA CAP SHEET
11. CAP SHEET
12. VENT

NOTE:

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SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: S2T-W-511-V25092023-VENTILATION UNIT-BUILDERS KERB

CLIENT: Luton Borough Council

DRG REF: S2T-W-511-V25092023

ROOF: Roof Area 02 & 03

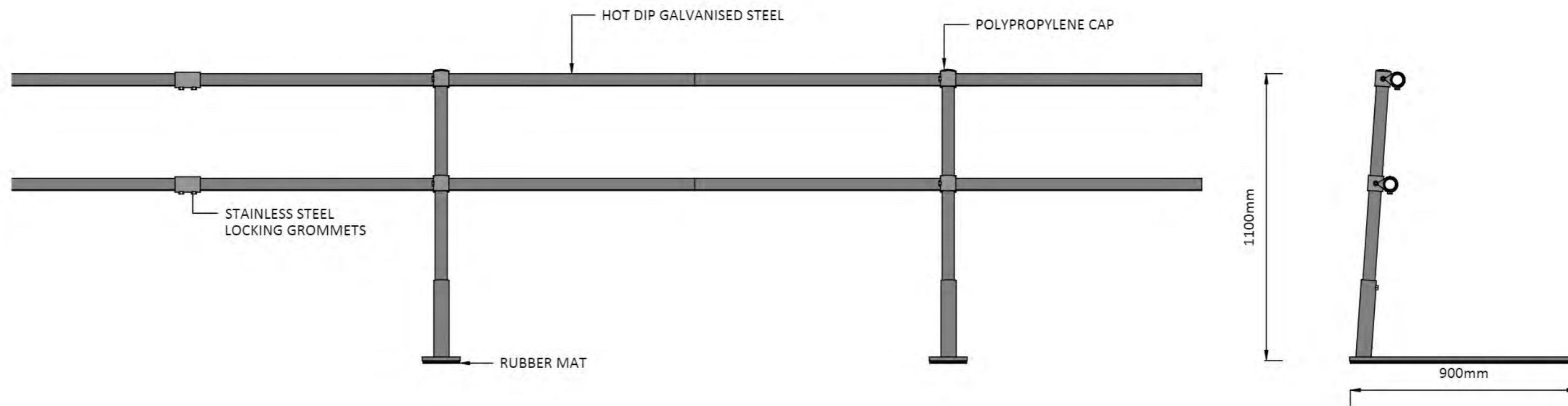
REV: 1


DATE: 27/06/2024

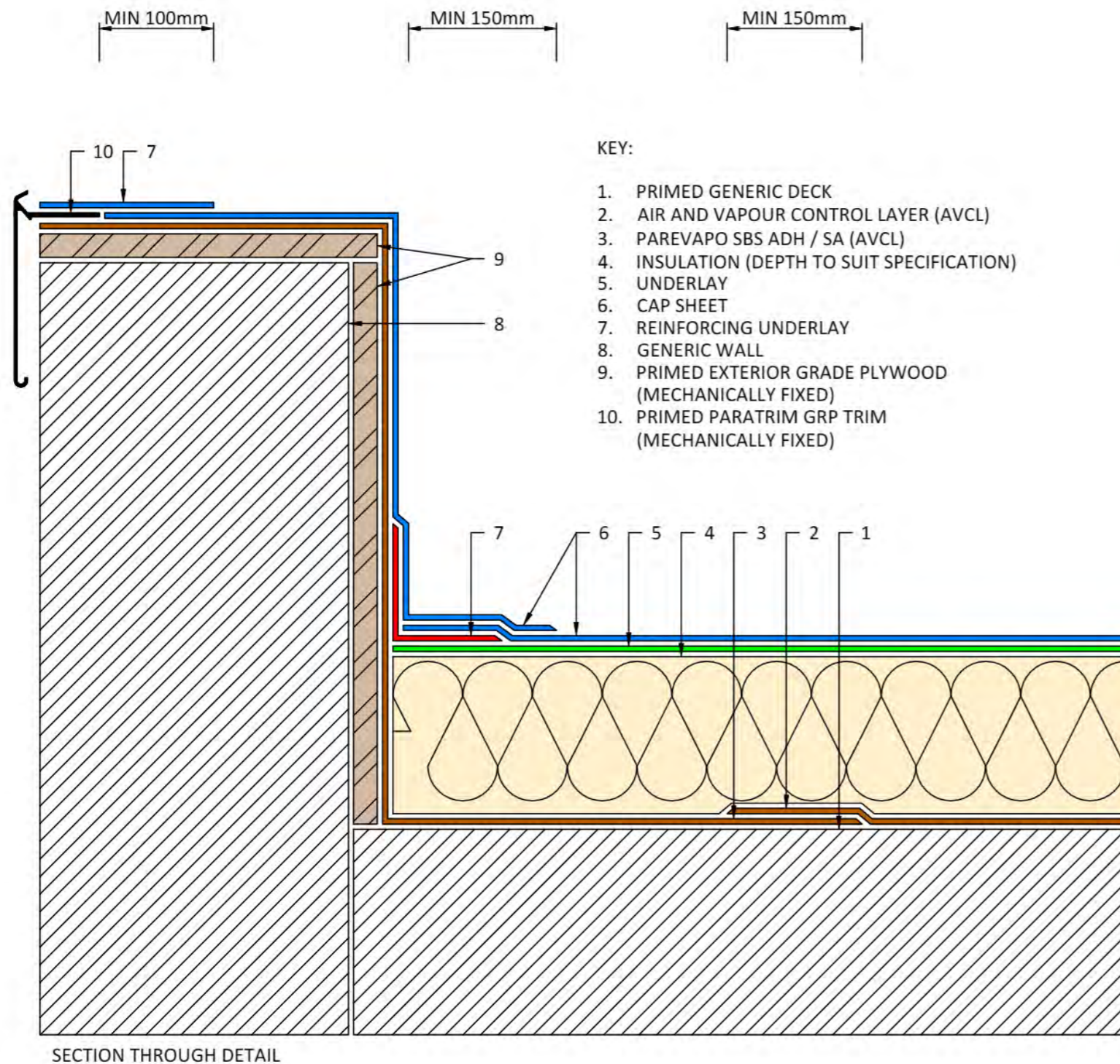
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- KEY:
1. RUBBER MAT
 2. LANGUARD BASE
 3. LANGUARD UPRIGHT
 4. LANGUARD RAIL
 5. LANGUARD CLAMP
 6. STAINLESS STEEL LOKING GROMMETS

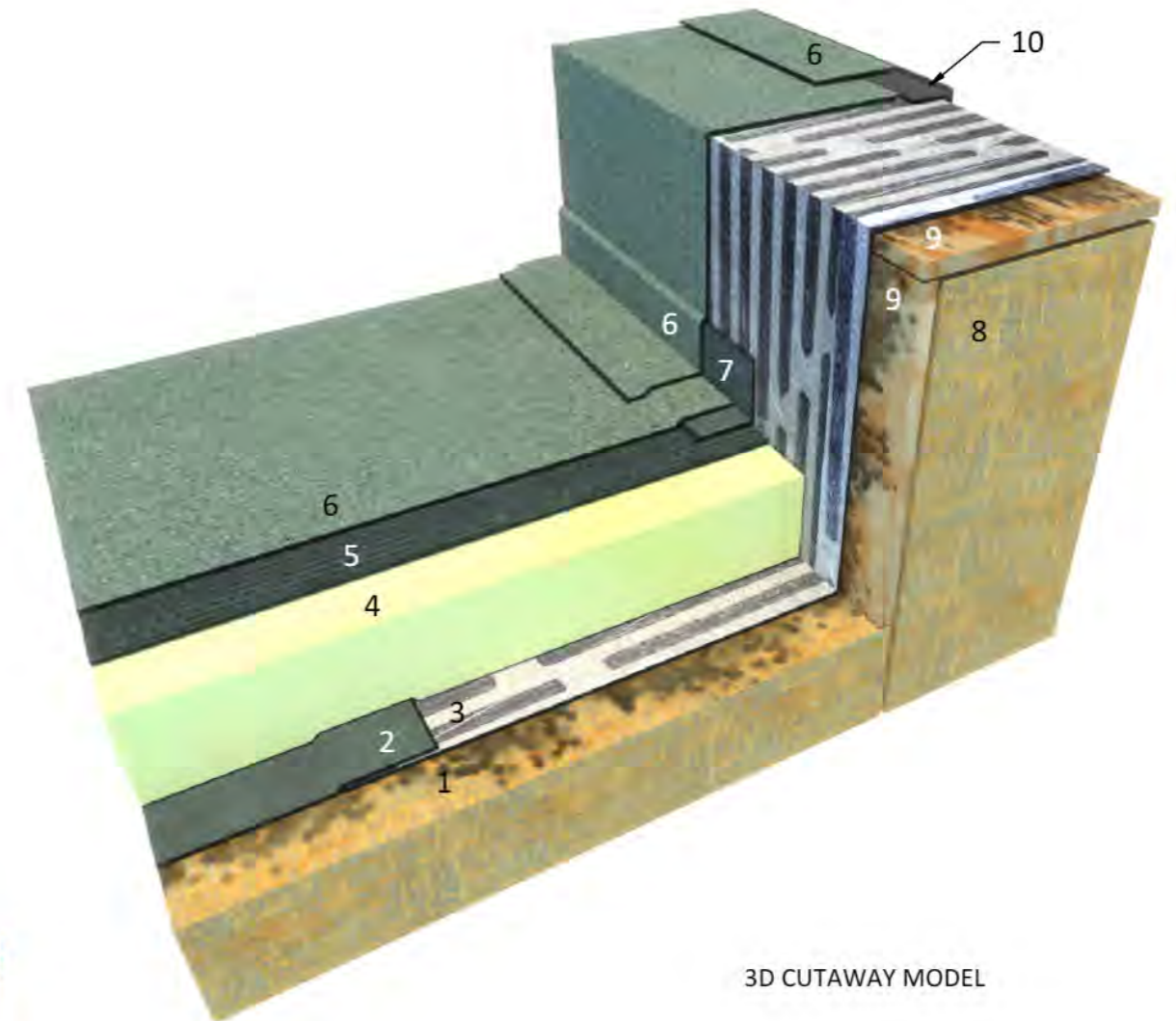


NOTE: DETAIL DRAWING IS INDICATIVE ONLY IS FOR GUIDANCE PURPOSES ONLY. SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.	PROJECT: Station Road 3 - 50214			
	DETAIL: A-801-V02082018-LANGUARD		ROOF: Roof Area 01, Roof Area 02 & 03	
	CLIENT: Luton Borough Council		REV: 1	
	DRG REF: a-801-v02082018-languard		DATE: 27/06/2024	
			SCALE: NTS	



KEY:

1. PRIMED GENERIC DECK
2. AIR AND VAPOUR CONTROL LAYER (AVCL)
3. PAREVAPO SBS ADH / SA (AVCL)
4. INSULATION (DEPTH TO SUIT SPECIFICATION)
5. UNDERLAY
6. CAP SHEET
7. REINFORCING UNDERLAY
8. GENERIC WALL
9. PRIMED EXTERIOR GRADE PLYWOOD (MECHANICALLY FIXED)
10. PRIMED PARATRIM GRP TRIM (MECHANICALLY FIXED)



NOTE:

DETAIL DRAWING IS INDICATIVE ONLY IS FOR GUIDANCE PURPOSES ONLY.

SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: S2TR-W-212-V26102023 PLY CLAD UPSTAND RATIONALISATION

CLIENT: Luton Borough Council

DRG REF: S2TR-W-212-V26102023

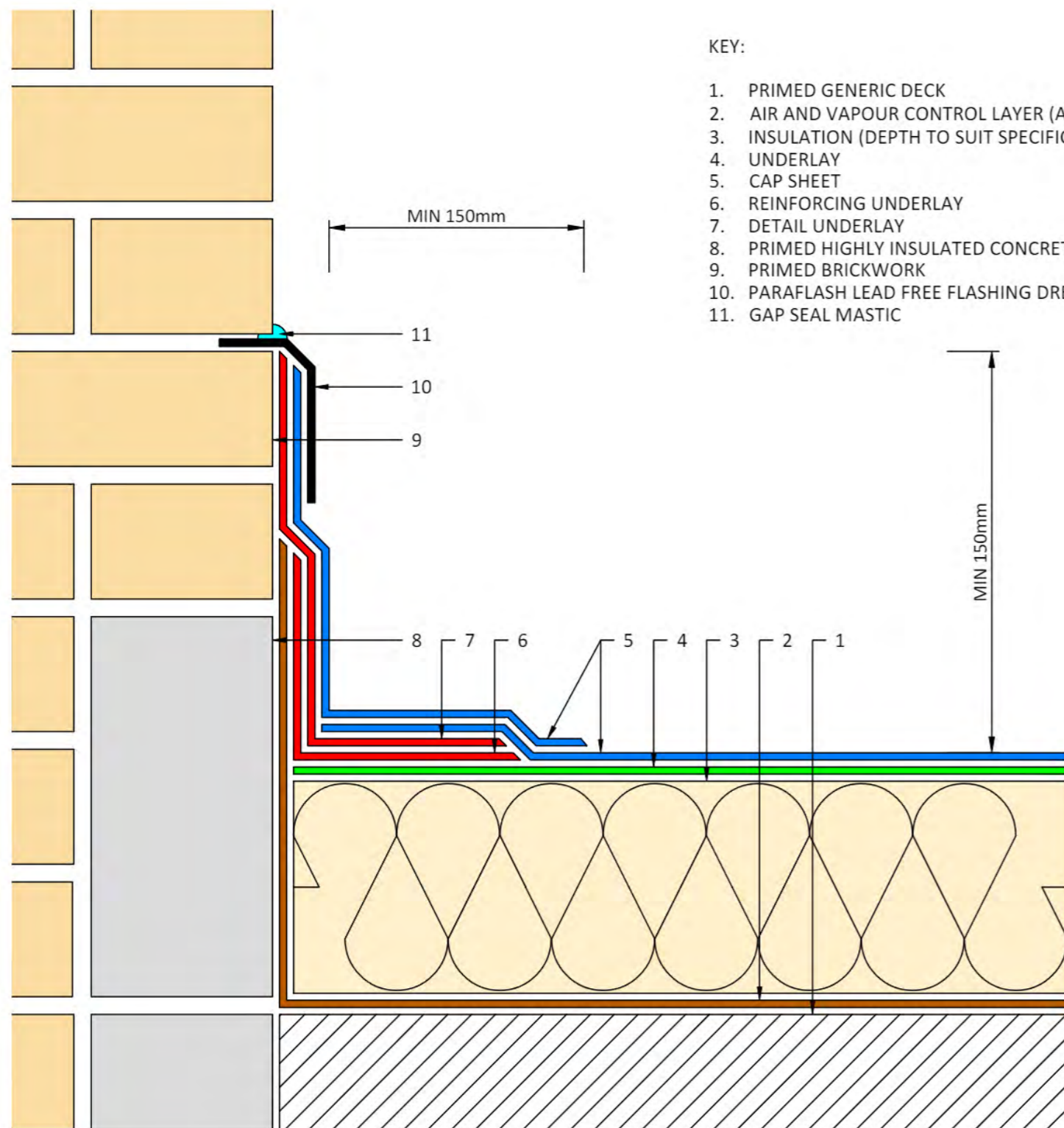
ROOF: Roof Area 02 & 03

REV: 1

DATE: 27/06/2024

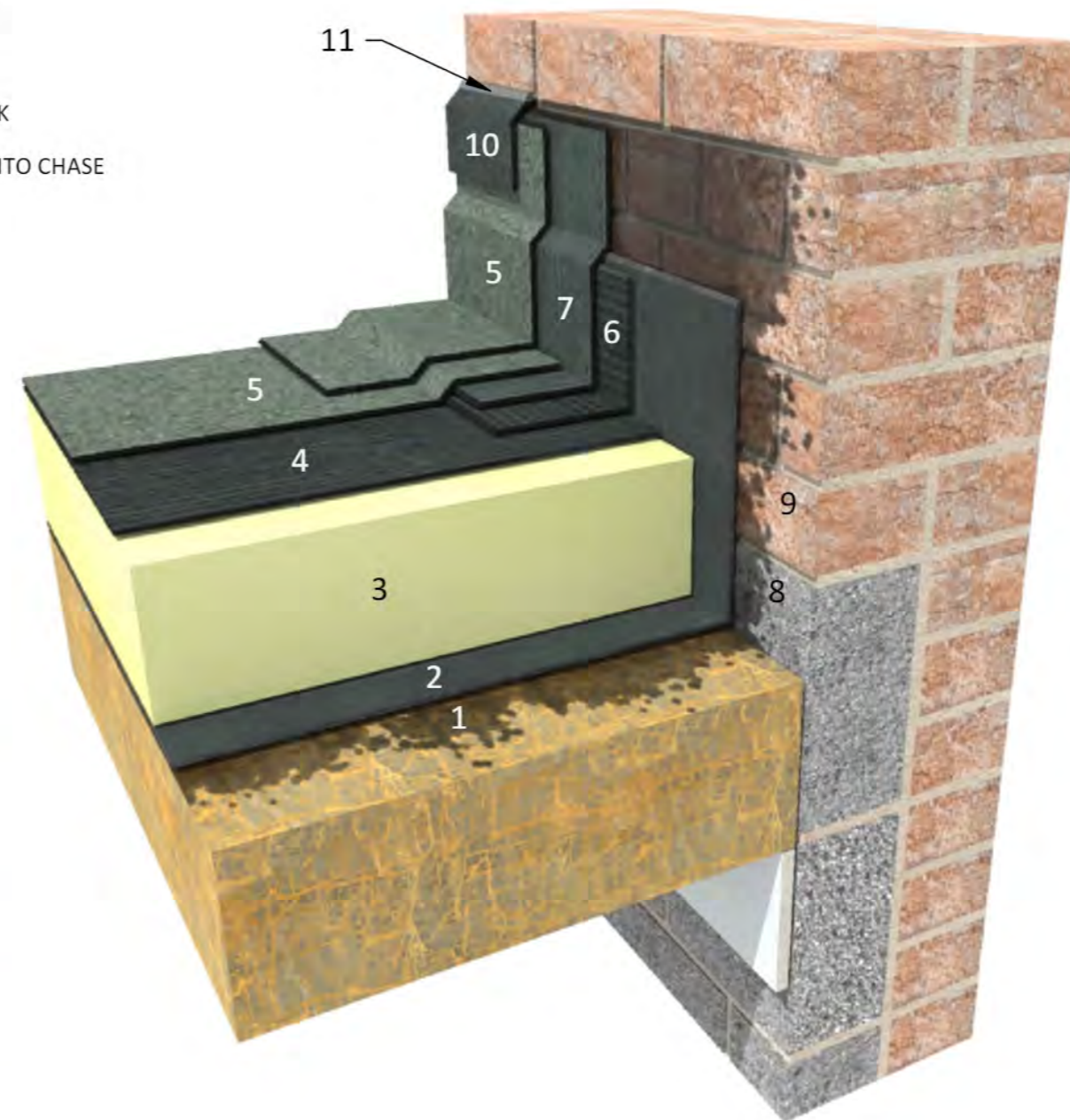
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KEY:

1. PRIMED GENERIC DECK
2. AIR AND VAPOUR CONTROL LAYER (AVCL)
3. INSULATION (DEPTH TO SUIT SPECIFICATION)
4. UNDERLAY
5. CAP SHEET
6. REINFORCING UNDERLAY
7. DETAIL UNDERLAY
8. PRIMED HIGHLY INSULATED CONCRETE BLOCK
9. PRIMED BRICKWORK
10. PARAFASH LEAD FREE FLASHING DRESSED INTO CHASE
11. GAP SEAL MASTIC



SECTION THROUGH DETAIL

3D CUTAWAY MODEL

NOTE:

DETAIL DRAWING IS INDICATIVE ONLY IS FOR GUIDANCE PURPOSES ONLY.

SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: RBM-W-101-V03122019-SKIRTING TO BRICKWORK

CLIENT: Luton Borough Council

DRG REF: RBM-W-101-V03122019

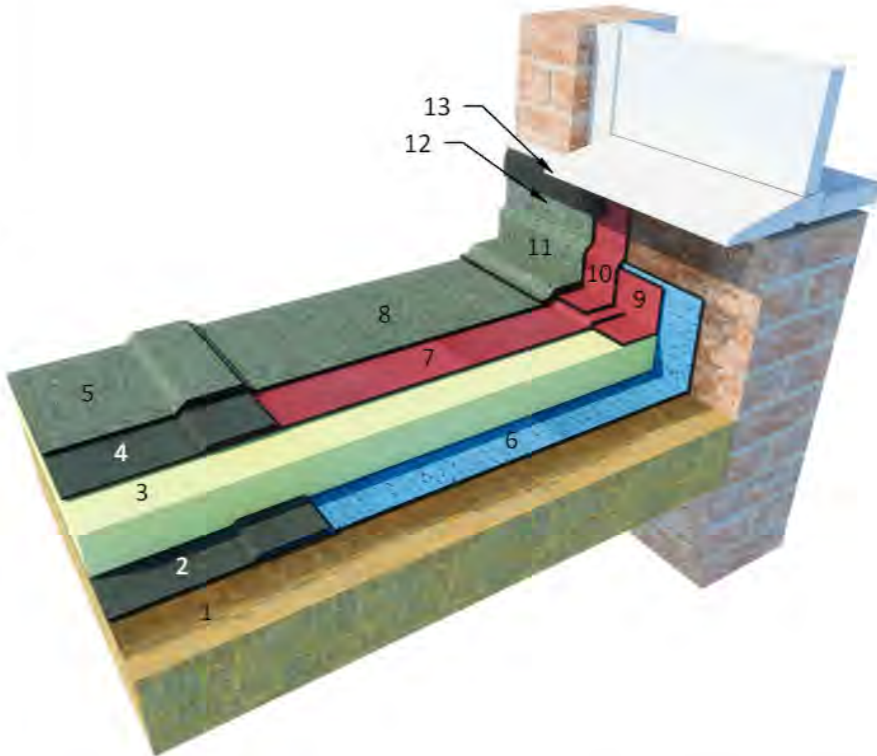
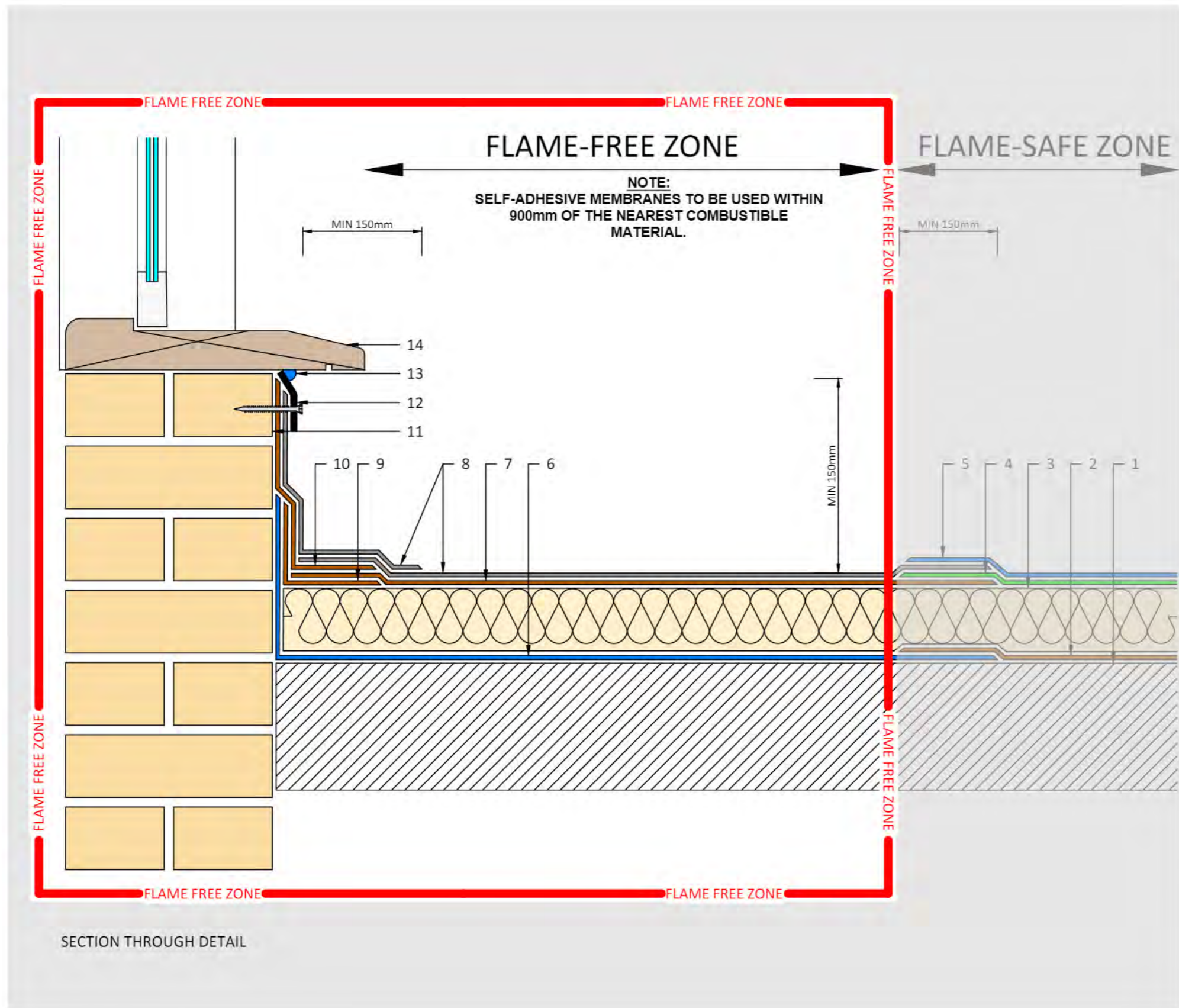
ROOF: Roof Area 01

REV: 1

DATE: 27/06/2024

SCALE: NTS





3D CUTAWAY MODEL

KEY:

1. PRIMED GENERIC DECK
2. PRIMED BRICKWORK
3. SA AIR AND VAPOUR CONTROL LAYER (AVCL)
4. AIR AND VAPOUR CONTROL LAYER (AVCL)
5. PRIMED INSULATION (DEPTH TO SUIT SPECIFICATION)
6. SA REINFORCING UNDERLAY
7. SA UNDERLAY
8. SA DETAIL UNDERLAY
9. UNDERLAY
10. SA CAP SHEET
11. CAP SHEET
12. REVERSED TERMINATION BAR
13. GAP SEAL MASTIC
14. CILL

NOTE:

DETAIL DRAWING IS INDICATIVE ONLY IS FOR GUIDANCE PURPOSES ONLY.
SPECIFICATION TO TAKE PRECEDENCE OVER ANY DRAWINGS.

PROJECT: Station Road 3 - 50214

DETAIL: S2T-W-109-V25092023-SKIRTING TO BELOW CILL AND NO GUTTER

CLIENT: Luton Borough Council

DRG REF: S2T-W-109-V25092023

ROOF: Roof Area 02 & 03

REV: 1

DATE: 27/06/2024

SCALE: NTS



Report Document – No. 50214

PROJECT NAME: Former Flitwick Barclays Bank

Project Address: Station House, Flitwick Railway Station
Steppingley Road
Flitwick
Bedford
Bedfordshire
MK45 1AJ

Client Details: Luton Borough Council

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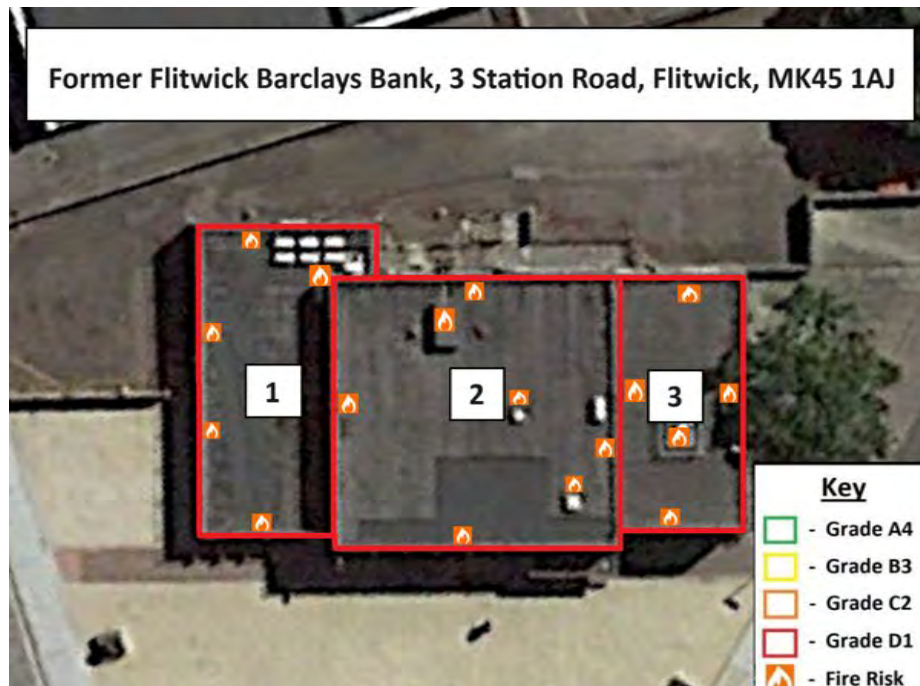


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Roof Survey Report & Recommendations

Roof area covered by this report: Roof Area 01, Roof Area 02, Roof Area 03



Key:

[A4] - As new, no works required.

[B3] - Functional: The waterproofing is performing as intended and should not require any works within 5-15 years.

[C2] - Requires attention: The roof is showing signs of failure and budget should be set aside for refurbishment as soon as possible.

[D1] - In need of urgent refurbishment: The roof areas should be refurbished or replaced as a matter of urgency.

1. Outline Description

This report has been produced for Luton Borough Council for the express use in the refurbishment of the designated roof areas of the property stated above. It is based on our site inspection of Station House, Flitwick Railway Station, Steppingley Road, Flitwick, Bedford, Bedfordshire, MK45 1AJ and should be read in conjunction with the enclosed photographs.

2. Scope of Report

This report is not a structural survey.

Any comments on roof structure or other building related issues in this report should not be taken to imply that its integrity has been assessed or deemed acceptable. A qualified party should verify any concerns relating to the integrity and/or capabilities of any part of the structure.

Report: Former Flitwick Barclays Bank

All the Langley Waterproofing Systems Ltd reports are written on the basis that the substrates, roof deck and structure are sound and durable. We cannot accept responsibility for the consequences of the latent defects in the roof deck and structure.

Listed Building Status: It is the responsibility of the building surveyor and/or client to ascertain the status of the building/s in question.

3. Roofs

Core Samples: These are taken for guidance purposes and indicate the construction only at the sample locations. Condition or levels of degradation affecting the coverings are only applicable at the time of inspection. Both construction and condition may vary throughout the roof area.

3.1. Roof Area 01

Weather at time of survey: Sunny

Core Sample Information

ID	Feature	Condition	Thickness
1	Deck - Plywood		
	Air and Vapour Control Layer - Bituminous		
	Insulation - Cork	Wet	80 mm
	Waterproofing - Built Up Felt		



Report: Former Flitwick Barclays Bank



Thermal Performance & Conformance to the Building Regulations

We have completed thermal calculations to determine the existing roof system's thermal performance (U-value).

Based on the information obtained during our survey, our calculations suggest the roof has a U-value of **3.41 W/m²K** which falls well outside the threshold U-value of 0.35 W/m²K and should be considered extremely poor. This area will therefore require thermally upgrading upon refurbishment.

The latest edition of Approved Document L (ADL), which details requirements for thermal performance under the Building Regulations, confirms the following:

The flat roof refurbishment of a non-dwelling should achieve a U-value of 0.18 W/m²K. To avoid the risk of condensation, the absolute minimum U-value at any point can be no greater than 0.35 W/m²K.

Report: Former Flitwick Barclays Bank

Roof Defects and Design Considerations

Roof Surface

The waterproofing on Roof Area 01 is constructed from RBM felt and has been graded a D1 status. The roof coverings are likely in excess of 20 years.

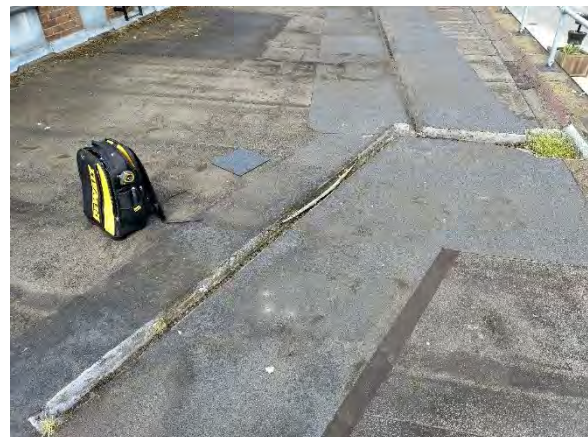
RBM felt coverings appear tired; migration of protective mineral chippings through wind and rain has left the bitumen exposed to degradation from UV. In some areas the reinforcement mesh can be seen within the cap sheet indicating a loss of waterproofing qualities.

Blisters within the existing waterproofing system strongly suggest that there may be design issues relating to interstitial condensation. Another possible explanation is that water vapour was trapped during construction, or water has found its way into the roof system during the service life of the roof.

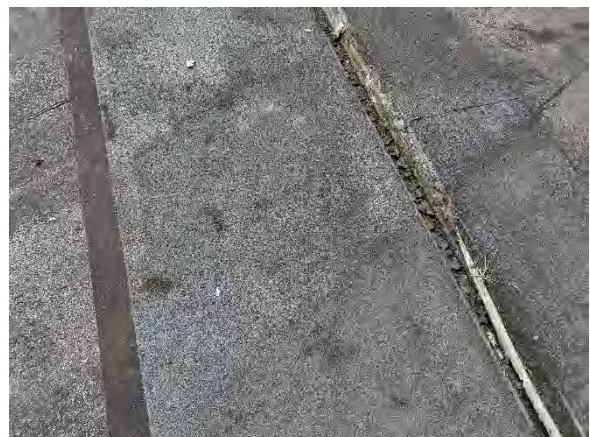
The roof surface has become brittle which confirms that the roof has reached the end of its service life. A brittle surface indicates that the roof waterproofing system is significantly less flexible, so cracks are likely to appear over time.

Moss growth is visible across Roof Area 01. When left untreated, over time moss can cause permanent damage to the RBM felt coverings.

There is physical damage to the existing roof waterproofing system has been evidenced, it has likely been caused by fall impact on the surface.



Report: Former Flitwick Barclays Bank



Report: Former Flitwick Barclays Bank



Report: Former Flitwick Barclays Bank



Repairs

Remedial liquid and RBM felt repairs have been installed to the internal gutter in an attempt to prevent water ingress at this location. Multiple types of materials used indicate indicates that this is an ongoing issue.

Both types of repairs have begun to de-bond from position, this is now providing little or no protection against water ingress which is further evidenced by the growth of vegetation.



Report: Former Flitwick Barclays Bank



Report: Former Flitwick Barclays Bank



Report: Former Flitwick Barclays Bank

Rainwater Goods

Internal Gutter

Roof Area 01 is noted to drain to an internal gutter.



Vertical Outlet

Blocked and in immediate need of unblocking so the roof can drain as intended.

The presence of living organic material may indicate that the drainage system is blocked.



Report: Former Flitwick Barclays Bank

Details

Abutment with lead counterflashing

The lead counter flashings appear to be in a good condition.



Report: Former Flitwick Barclays Bank

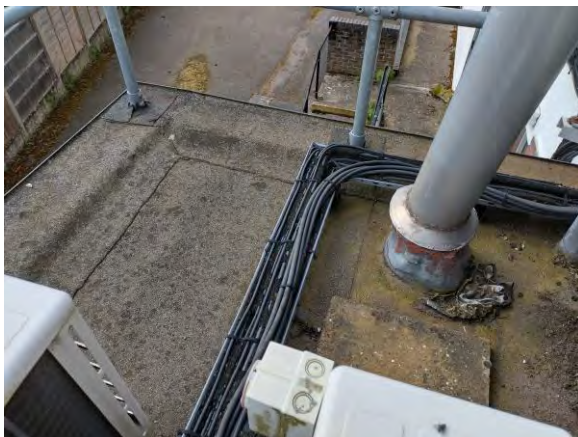
Water check kerb

Water check kerb noted to Roof Area 01. Severe mineral migration has occurred due to win and rain uplift exposing the bitumen to UV degradation.



Rooftop Plant

Cables/cable tray



Report: Former Flitwick Barclays Bank

Hot pipe



Free standing and wall mounted air conditioning units



Report: Former Flitwick Barclays Bank

Rooftop Safety

Remedial RBM felt repairs have been installed to the handrail footings likely due to experiencing



3.2. Roof Area 02

Core Sample Information

ID	Feature	Condition	Thickness
1	Deck - Plywood		
	Air and Vapour Control Layer - Bituminous		
	Insulation - Cork	Wet	80 mm
	Waterproofing - Built Up Felt		



Report: Former Flitwick Barclays Bank



Thermal Performance & Conformance to the Building Regulations

We have completed thermal calculations to determine the existing roof system's thermal performance (U-value).

Based on the information obtained during our survey, our calculations suggest the roof has a U-value of **3.41 W/m²K** which falls well outside the threshold U-value of 0.35 W/m²K and should be considered extremely poor. This area will therefore require thermally upgrading upon refurbishment.

The latest edition of Approved Document L (ADL), which details requirements for thermal performance under the Building Regulations, confirms the following:

The flat roof refurbishment of a non-dwelling should achieve a U-value of 0.18 W/m²K. To avoid the risk of condensation, the absolute minimum U-value at any point can be no greater than 0.35 W/m²K.

Report: Former Flitwick Barclays Bank

Roof Defects and Design Considerations

Roof Surface

The waterproofing on Roof Area 02 is constructed from RBM felt and has been graded a D1 status. The roof coverings are likely in excess of 20 years.

RBM felt coverings appear tired; migration of protective mineral chippings through wind and rain has left the bitumen exposed to degradation from UV. In some areas the reinforcement mesh can be seen within the cap sheet indicating a loss of waterproofing qualities.

The RBM felt has begun to blister as the result of trapped air and moisture beneath the system. During changes in temperature the trapped air will expand and contract. Blisters will place stress on the laps and lead to lap failures.

The roof surface has become brittle which confirms that the roof has reached the end of its service life. A brittle surface indicates that the roof waterproofing system is significantly less flexible, so cracks are likely to appear over time.

The presence of organic material may indicate that the roof slope is insufficient. Unless removed, the service life of the roof is likely to be reduced.



Report: Former Flitwick Barclays Bank



Report: Former Flitwick Barclays Bank



Repairs

Remedial liquid repairs have been installed along the laps of the RBM felt in a failed attempt to prevent water ingress.

Extensive remedial RBM felt repairs have also been installed to Roof Area 02 likely due to having issues relating to water ingress. These repairs are failing as the result of debonding and now present large openings for water ingress.



Report: Former Flitwick Barclays Bank



Report: Former Flitwick Barclays Bank



Remedial Self adhesive flashband repairs have been installed to the tank house cladding in an attempt to prevent water ingress. In some cases liquid has been installed on top of earlier installed flashband indicating an ongoing issue with water ingress at this location.



Report: Former Flitwick Barclays Bank



Rainwater Goods

Vertical Outlet



Report: Former Flitwick Barclays Bank

Details

Water check kerb

There is evidence that repairs have been undertaken. Multiple repairs suggest an ongoing or historical issue at this location.



Abutment to cladding.

There is damage to this detail which presents a potential pathway for rainwater to ingress into the roof system or building. There is evidence of water ingress into the roof system.



Report: Former Flitwick Barclays Bank



Rooflights

The glazing has been damaged by the effects of UV radiation and needs replacement. The unit provides poor light transmission into the building.



Report: Former Flitwick Barclays Bank

Rooftop Plant

Kerb Raised Plant



SVP

There is evidence that repairs have been undertaken. Multiple repairs suggest an ongoing or historical issue at this location.



Report: Former Flitwick Barclays Bank



Rooftop Safety



Report: Former Flitwick Barclays Bank

3.3. Roof Area 03

Core Sample Information

ID	Feature	Condition	Thickness
1	Deck - Plywood		
	Air and Vapour Control Layer - Bituminous		
	Insulation - Cork	DRY	80 mm
	Waterproofing - Bituminous Membrane Mineral Finished		



Report: Former Flitwick Barclays Bank

Thermal Performance & Conformance to the Building Regulations

We have completed thermal calculations to determine the existing roof system's thermal performance (U-value).

Based on the information obtained during our survey, our calculations suggest the roof has a U-value of **3.41 W/m²K** which falls well outside the threshold U-value of 0.35 W/m²K and should be considered extremely poor. This area will therefore require thermally upgrading upon refurbishment.

The latest edition of Approved Document L (ADL), which details requirements for thermal performance under the Building Regulations, confirms the following:

The flat roof refurbishment of a non-dwelling should achieve a U-value of 0.18 W/m²K. To avoid the risk of condensation, the absolute minimum U-value at any point can be no greater than 0.35 W/m²K.

Roof Defects and Design Considerations

Roof Surface

Mineral or stone chippings protect the roof waterproofing system from the harmful effects of UV degradation. The absence of this protection will significantly reduce the service life of the roof.

The presence of organic material may indicate that the roof slope is insufficient. Unless removed, the service life of the roof is likely to be reduced.



Report: Former Flitwick Barclays Bank



Report: Former Flitwick Barclays Bank

Rainwater Goods

Leaf guards are missing. These prevent blockages and ensure calculated drainage performance is maintained. Organic matter must be cleared, and the integrity of the drainage system confirmed by a specialist.



Report: Former Flitwick Barclays Bank

Details

Expansion joint



Parapet kerb with continuous roof covering



Report: Former Flitwick Barclays Bank

Rooflights

Polycarbonate

The glazing has been damaged by the effects of UV radiation and needs replacement. The unit provides poor light transmission into the building.



Report: Former Flitwick Barclays Bank

Rooftop Plant

TV Aerial



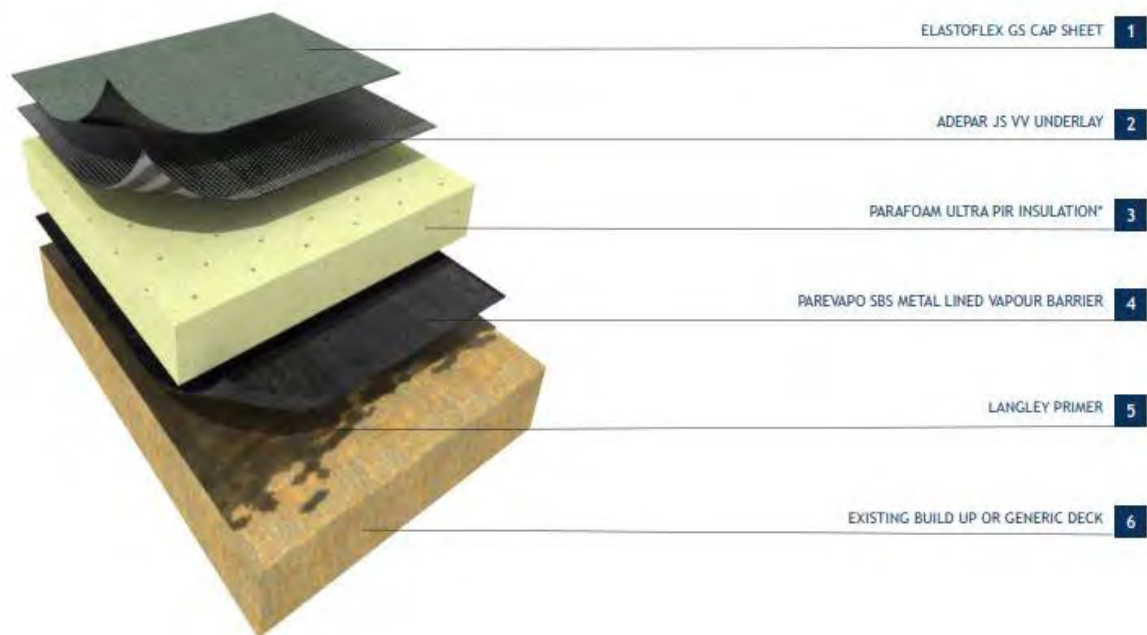
4. Summary & Recommendations

Roof Area	Grade	Deck Type	Insulation Requirement	Existing Waterproofing	Recommendation
Former Flitwick Barclays Bank - Roof Area 01	D1	Plywood	Cork	Built Up Felt	Strip to the AVCL and install a new TA-25 Warm System.
Former Flitwick Barclays Bank - Roof Area 02	D1	Plywood	Cork	Bituminous Membrane Mineral Finished	Strip to the AVCL and install a new TA-25 Warm System.
Former Flitwick Barclays Bank - Roof Area 03	D1	Plywood	Cork	Bituminous Membrane Mineral Finished	Strip to the AVCL and install a new TA-25 Warm System.

5. Proposed System

Guarantee Options

TA25 – 25 year insurance backed guarantee. Terms available at end of report.



6. Langley Waterproofing Systems Ltd Guarantee

All the specified systems come with Langley Waterproofing Systems Ltd, unique single premium, independent insurance-backed guarantee. The premium is pre-paid, in full, for the guarantee period stated in the specification and covers the following:

- ✓ **Materials**
- ✓ **Labour**
- ✓ **System Design**
- ✓ **Consequential Loss**

In addition:

- **The guarantee is transferable between building owners**
- **Cover increases in line with an approved construction price index**
- **Each project is covered for the full value of reinstatement of materials including installation**
- **Insurance cover automatically reverts to the building owner should Langley and the roofing contractor fail to rectify defects for whatever reason**

7. Langley Waterproofing Technical Support

The project/works will also be monitored by a Langley Technical Manager on a weekly basis, who will provide a written report on the progress and any issues arising. This monitoring service is provided to ensure full compliance with the specification and to approve the completed works for guarantee purposes and includes:

- **A detailed final inspection highlighting any snagging items.**

8. Appendices

- Glossary of Terms
- Bibliography

Report: Former Flitwick Barclays Bank

GLOSSARY OF TERMS

A/C units	Air conditioning plant.
ACM	Asbestos Containing Material.
Attachment layer fixed/nailed)	An underlay used to isolate the new system from the substrate (usually mechanically).
Bunding	Internal waterproofing creating a 'tank' to contain potential leaks from water tanks.
BUR	Built-up felt roofing.
Cap sheet	Top layer of a built-up membrane system.
Cat ladder	Fixed (vertical) access ladder.
Cold roof	Roof structure designed with the insulation on the warm side (inside) of the roof deck.
Composite deck	A hybrid structural deck of rigid foam insulation with a factory bonded plywood top.
Cut-to-falls insulation	Insulation boards manufactured with a built-in fall.
Dew point (condensate).	Temperature at which moisture laden air releases the moisture as liquid water.
Free-draining edge	Roof perimeter that allows water to drain over, usually to an external gutter.
Free-standing	Not affixed to or through the structure.
Granule finish	Factory applied protective layer of fine granules to cap sheet.
Hard edge	A timber batten installed at exposed edges of insulation as a support to prevent damage to the insulation.
Hybrid deck	A structural deck that is also an insulant.
Inverted roof	A warm roof structure designed with the insulation placed over the waterproofing system.
LMR	Lift Motor Room.
Mushroom vent	Roof penetration used as a pressure release to the substrate.
OSB	Oriented Strand board.
Partial bonding layer	See venting layer.
Pour & Roll	Method of bonding of bituminous membranes using hot bitumen.
PIR	Rigid polyisocyanurate.
Protected membrane roof	See Inverted Roof.
PUR	Rigid polyurethane.
RWO	Rainwater outlet.
Refurbidrain	A purpose made rainwater outlet designed to fit inside an existing outlet.
Sandwich construction	A warm roof configuration, where the insulation is sandwiched between a vapour control layer and the waterproofing.
Scupper	Low level over-flow outlet from a bunded area such as a tank room etc.
Stramit	Trade name for a 'hybrid' supporting deck of compressed straw board.
SVP	Soil vent pipe.
SBS	Styrene-Butadiene-Styrene.
Tapered insulation	Insulation boards manufactured with a built-in fall.
Temperature gradient	the path of temperature change through a (roof) structure from inside to outside, plotted on a graph.
Timber deck	Either close boarding or tongue and grooved boards. (Not panelled material such as plywood, OSB board etc.).
Torching	Method of bonding of bituminous membranes using propane gas torches.
Vapour barrier	See Vapour Control Layer. Bituminous membrane designed to prevent the passage of moisture laden air. Usually with an aluminium core.
Vapour check	See Vapour Control Layer. Bituminous membrane designed to restrict the passage of moisture laden air.
Vapour control layer	Underlay used below insulation to control the passage of moisture laden air.
Vapour barrier	See Vapour Control Layer. Bituminous membrane designed to prevent the passage of moisture laden air. Usually with an aluminium core.
Venting layer	Bituminous felt underlay with regular holes at predetermined centres to allow partial bonding of membranes on certain types of substrate.
Underlay	Interim layer of a multi-layer built-up membrane system.
Upside-down roof	See Inverted roof.
WBP	Water and Boil Proof (plywood).
Warm roof	Roof structure designed with the insulation on the cold side (outside) of the roof deck.
Wetted drip	Felt membrane edge detail.
Woodwool slab	Hybrid structural deck of cement coated wood shavings.

Report: Former Flitwick Barclays Bank

BIBLIOGRAPHY

The following British and European Standards and Codes of Practice are relevant to the installation of Langley roofing systems and products.

BS 6399 – 1: 1996	Loadings for Buildings. Code of Practice for dead and imposed loads.
BS 6399 - 2: 1997	Loadings for Buildings. Code of Practice for Wind Loads.
BS 8217 : 2005	Code of Practice for Built-up Felt Roofing.
BS EN 636 : 2012	Plywood, specifications.
BS 5268 – 2: 2002	Structural Use of Timber. Code of Practice for Permissible Stress Design, Materials and Workmanship.
BS EN 300 : 2019	Oriented Strand Boards (OSB). Definitions, Classifications and Specifications.
BS 747 : 2000	Reinforced bitumen sheets for roofing.
BS 6229 : 2018	Flat Roofs With Continuously Supported Roof Coverings – Code of Practice.
BS EN 12056 – 3: 2000	Gravity Drainage Systems Inside Buildings – Part 3 : Roof Drainage, layout and calculations.
BS EN 1253 – 1: 2022	Gullies for Buildings – Part 1 : Requirements.
BS 476 – 3 : 2004	Fire tests on building materials and structures. External fire exposure roof test.
BS 5250 : 2021	Code of Practice for the control of condensation in buildings.
BS 5950 – 6: 1995	Structural use of steelwork in buildings. Code of Practice for design of light gauge profiled steel sheeting.
BS EN ISO 6946 : 2007	Building components and building elements – Thermal resistance and thermal transmittance – Calculation method.
BR443:2002	Conventions for U-value calculations.
BS EN 13162: 2001	Thermal insulation products for buildings – Factory made mineral wool (MW) products – Specification.
BS EN 13163: 2001	Thermal insulation products for buildings – Factory made products of expanded polystyrene (EPS) - Specification.
BS EN 13164: 2001	Thermal insulation products for buildings – Factory made products of extruded polystyrene foam (XPS) - Specification.
BS EN 13165: 2001	Thermal insulation products for buildings – Factory made rigid polyurethane foam (PUR) products - Specification.
BS EN 13166: 2001	Thermal insulation products for buildings – Factory made products of phenolic foam (PF) - Specification.
BS EN 13168: 2001	Thermal insulation products for buildings – Factory made products of woodwool (WW) - Specification.
BS EN 13170: 2001	Thermal insulation products for buildings – Factory made products of expanded cork (CB) - Specification.
Approved Document L Volume 1	Conservation of fuel and power. Dwellings 2021 edition incorporating 2023 amendments.
Approved Document L Volume 2	Conservation of fuel and power. Buildings other than dwellings 2021 edition incorporating 2023 amendments.
British Urethane Foam Manufacturers Association	(BRUFMA) Information Document 1/2001
BS 6651: 1999	Code of Practice for protection of structures against lightning.
BS 3837 – 2: 1990 (2002)	Expanded polystyrene boards. Specification for extruded boards.
BS 3837 – 1: 1986 (2002)	Expanded polystyrene boards. Specification for boards manufactured from expandable beads.
BS 1105: 1981 (1994)	Specification for woodwool cement slabs up to 125mm thick.
BS 8281: 1998	Code of practice for mastic asphalt roofing.
BS EN 795: 1997	Protection against falls from height. Anchor devices. Requirements and testing.

Specification Document

Project: 50214

Project Name: Station Road 3

Project Address: Station House, Flitwick Railway Station
Steppingley Road
Flitwick
Bedford
Bedfordshire
MK45 1AJ

Client:

Client Details: Luton Borough Council

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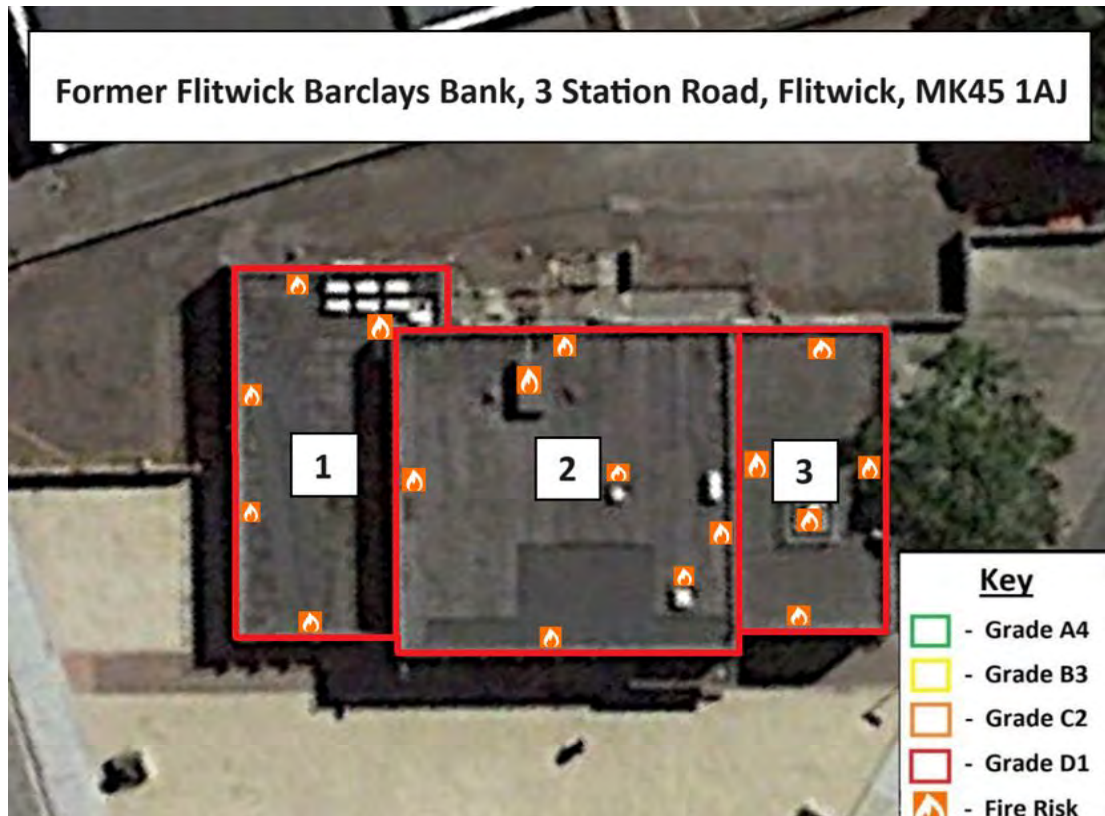
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Station Road 3

Roofing Specification

Roof areas covered by this specification: Roof Area 01, Roof Area 02 & 03.



Outline Description

This specification has been produced for Luton Borough Council for the express use in the construction of the designated roof areas of the property stated above.

Core Samples: These are taken for guidance purposes and indicate the construction only at the sample location/s. Condition/levels of degradation affecting the coverings are only applicable at the time of inspection. Both construction and condition may vary throughout the roof area.

Preliminaries and General Conditions

1. Before tendering, the contractor should examine the drawings and specification documents, visit the site and ascertain all local conditions and restrictions, accessibility, the full extent and nature of the work, the supply and conditions affecting labour and the execution of the contract generally. No claims arising from failure to do so will be considered.
2. The contractor shall provide, erect and maintain all necessary hoists, scaffolding, mechanical equipment, plant etc of all descriptions required for the satisfactory completion of the works and remove all, as and when required, or when directed by the Contract Administrator.
3. The contractor shall not display any advertisements on the scaffolding other than the firm's name board and contact details; neither shall he permit any other advertisements to be displayed without the written authority of the Contracts Administrator.
4. The contractor shall provide all necessary containers and storage facilities for materials and for workshops that may be required, maintain them and clear them away on completion.
5. The contractor shall provide all necessary latrines and other facilities for the use of operatives as required by the Construction (Design & Management) Regulations 2015 (CDM 2015), maintain them in decent condition and clear them away on completion.
6. All roofing materials are to be supplied by Langley Waterproofing Systems Ltd and to be fit for purpose and of the type and quality described herein. Any sub-standard materials will be rejected. No alternatives are to be substituted.
7. The contractor shall employ none but fully qualified, competent tradesmen and the whole of the work shall be carried out and completed in accordance with "Best Practice".
8. The contractor shall carry out the works without undue inconvenience and nuisance and without danger to occupants and users.

Note

These preliminaries and general conditions will apply in all situations, except where the specifying client inserts a more comprehensive section of preliminaries and conditions, encompassing the complete project.

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Detailed Specification: 1

Roof Area 01

No.	Item	Unit	Qty	Rate	Total
1	SPECIFICATION REQUIREMENTS				
1.1	Guarantee: The following TA-25-W specification is to be covered by the Langley Waterproofing Systems Ltd, single-premium, pre-paid independently-insured workmanship and materials guarantee for a period of 25 years from the date of practical completion. In order to meet this requirement only roofing contractors that participate in this guarantee scheme may be used. The eligibility of proposed roofing contractors should be confirmed with Langley Waterproofing Systems Ltd, Tel: 01327 704778 prior to inviting tenders.				
1.2	Summary of Works: Strip existing waterproofing and defective insulation to reveal original AVCL. Prepare and prime AVCL ready to receive new waterproofing system. Install new Langley TA-25 RBM felt waterproofing system incorporating tapered Parafoam Ultra PIR insulation.				
1.3	Projects Under CDM: In relation to this project, under Construction (Design and Management) Regulations 2015 (CDM 2015) ensure that all duties are met as detailed here https://www.hse.gov.uk/construction/cdm/2015/summary.htm				
1.4	Roof Drainage - Guarantee Requirement - CCTV Inspection: Prior to works commencing and after practical completion; any existing external rainwater systems or internal outlet drainage points must be checked for blockages and cleared as necessary by the roofing contractor. In addition, it is a requirement that should internal drainage pipes exist, that they are inspected using CCTV technology to confirm their integrity and serviceability prior to the commencement of any works.				
1.5	Design Note - Warm Roof: This specification is based on a warm roof construction. The principal thermal insulation is above the structural deck.				
1.6	Design Note - Existing Falls: Overlay of any existing roof system or deck. The new system will follow the existing falls and any deviations will be replicated. As a result, some areas of standing water may occur. However, please note the accumulation of ice, snow or ponding water will not have an adverse effect on the Langley products specified. This applies to both the life expectancy and/or long-term performance of the system specified and will not affect, in any way, the guarantee status.				

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No.	Item	Unit	Qty	Rate	Total
1.7	<p>Tapered Insulation: When preparing a tapered scheme, a flat and level deck is assumed and, although the tapered scheme is intended to provide adequate drainage, some ponding may still occur due to obstructions, membrane lap build-ups or unforeseen deck deflection.</p> <p>Please note that neither ice, snow or ponding water will have an adverse affect on the Langley products specified. This applies to both the life expectancy and long-term performance of the system and will not affect in any way, the guarantee status.</p>				
1.8	<p>Design Note - Changes & Adjustments: Variations 'A' (general): Any variations must be agreed in writing by both the contract administrator and Langley Waterproofing Systems Ltd. These must be costed and authorised by the client but not be implemented until instructed by the client. Variations 'B' (minor): During work in progress, Langley Waterproofing Systems Ltd must be informed immediately of any proposed change/s and operatives must not implement any change/s until agreed by Langley (minor changes are deemed to be any item not falling within the scope of section A). Unauthorised Changes 'C' (general): Langley Waterproofing Systems Ltd will not be responsible for any changes of which they are unaware or have not authorised, nor will they accept any liability or associated costs due to system failure, i.e. labour, materials, design or programme delays, etc., resulting from said changes.</p>				

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No.	Item	Unit	Qty	Rate	Total
1.9	<p>Design Note - Approved Document Part B Building Regulations - Compartmented Walls:</p> <p>Overlaying Existing Waterproofing/Substrate:</p> <p>Where the Langley Waterproofing system bridges a compartmented wall, it is expected that the existing underlying system is laid on a substrate or deck rated class A2-s3, D2 or better (non-combustible) to BS EN 13501-1.</p> <p>Some buildings (Hotels, boarding houses, residential colleges, residence halls, hostels, offices, assembly and recreation buildings) no taller than 15m are permitted to have a roof deck classified as Euroclass B-s3, D2 or worse (combustible). However, to comply with Approved Document Part B, additional fire stopping will be required underneath the roof deck. Because of the reduced resilience to fire, thermoplastic insulation materials (XPS, EPS) can only be used within the 1500mm zone on either side, and over the compartment wall when the deck is rated class A2-s3, D2 or better (non-combustible) to BS EN 13501-1.</p> <p>Double-skinned insulated roof sheeting, such as standing seam or profile metal sheet roofing, should incorporate a band of material rated class A2-s3, D2 or better, a minimum of 300mm in width, centred over the wall.</p> <p>Note: Proposed specification and design will be subject to LABC (Local Authority Building Control) or assigned AI (Approved Inspector) approval before works can commence on-site. Where appropriate, Langley Waterproofing can offer support and guidance to assist application.</p>				
1.10	<p>Roof Structure - Disclaimer:</p> <p>It is deemed the responsibility of the Client Representative, Contractor and/or Property Owner to give due consideration towards the ability of the existing roof deck accepting any additional loadings imposed by the application of the new waterproofing system proposed within this specification. Langley Waterproofing Systems Ltd will not be held responsible or accept any liability or associated costs should structural defects or structural failure occur.</p>				
1.11	<p>Electronic Roof Integrity Test & Root Protection (Compulsory For Buried Systems) - Disclaimer:</p> <p>Should the roof waterproofing system receive any subsequent coverings such as an inverted roof system, green roof system, paving slabs, ballast, decking, or similar, an electronic leak detection (ELD) test must be carried out by a qualified expert to confirm the waterproofing system integrity.</p> <p>You must also ensure an ELD is completed if the roof will receive a PV panel installation.</p> <p>You must ensure a record of this ELD test, and any repairs completed, is shared with Langley.</p> <p>Where appropriate, a root resistant membrane must be installed to protect the Langley waterproofing system from root penetration.</p>				

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No.	Item	Unit	Qty	Rate	Total
1.12	Fire Risks: This specification has been formulated with due regard to the inherent risks of fire when using hot work flat roof waterproofing systems and application methods. To the best of our knowledge any potential hazards have been identified and the specification tailored to minimise the risk of accidental ignition occurring. Notwithstanding the foregoing, the contractor / installer is reminded that they have a duty of care and responsibility to carry out their own assessment of the proposed works with regard to the potential fire risk, and introduce working practices that takes any such risks into account. Should the contractor / installer have any reservations about any aspect of the specification proposal, or if during the course of the works any unforeseen items are discovered that present an actual or potential fire risk, they should contact Langley Waterproofing Systems Ltd immediately so that safer methods can be agreed and implemented which do not compromise the integrity of the specification and or its guarantees.				
1.13	Fire Risk - Drying Out: In the event of the roof being/becoming wet and drying out is necessary, the use of gas torches is not recommended and should be avoided. In all cases Safe2Torch guidelines should be followed. Standing water should be swept to the nearest outlets with a broom or squeegee (care must be taken to avoid debris blocking outlets). The remaining moisture should be soaked up using mops or dry rags and the surface left to dry out naturally. To speed up the process, specialist equipment is commercially available, see 'General Guidance & Requirements' in the appendices of this specification.				
1.14	Safe2Torch - Flame-free Zones: This specification has been compiled in accordance with the NFRC Safe2Torch guidance and includes areas that have been identified as presenting a risk of fire if gas torches are used. This requires the substitution of membranes in these areas.				
1.15	Flame-free Zones - Definition: A Flame-free Zone is defined as being within 900mm of a combustible substrate / material. Note: If combustible material forms part of an overhang then the Flame-free Zone starts from the extremity of the overhang.				
1.16	Risk Assessment - Fire - Installing Contractor: In line with their own Risk Assessment and Method Statement, the installing contractor is to identify any areas where the use of a naked flame is deemed too great a risk. This matter should be raised at the pre-start / pre-commencement meeting or stated in writing to Langley in order that an alternative flame free method can be adopted and specified.				

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No.	Item	Unit	Qty	Rate	Total
1.17	<p>Flame-free Zones - Identified Risk Areas: In accordance with Safe2Torch guidance the following area/s have been designated as 'flame-free' zone/s:</p> <p>Detail Noted: Perimeter Kerbs - SA AVCL Only</p> <p>Whilst these area/s have been identified, they may not be definitive. Due allowance must be made so that at any stage of this project, should any additional areas be designated a fire risk by any of the parties involved, they must be logged, all parties informed, and the appropriate measures employed.</p>				
1.18	<p>Fire Accreditation: Unless otherwise stated, the full waterproofing system and/or products contained within this specification have been tested for external fire exposure (both with and without insulation) in accordance with BS EN 13501-5: 2005 (European Test) and are accredited as Broof(t4).</p>				
1.19	<p>Langley Detailed Drawings: This specification is to be read in conjunction with detailed drawings issued and supplied by Langley Waterproofing. Should the contractor at any point find discrepancies between the issued specification and issued drawings, it is required that the specification takes precedence in all cases, unless otherwise notified and approved. No additional costs or liability arising from failure to follow specification or notifying Langley Waterproofing Systems Ltd of any discrepancies found in good time prior to commencement of works will be considered.</p>				
1.20	<p>Guarantee Requirement - Torch-on & Hot Air Applied Membranes: Applicable to all layers. A 5-10mm bead of bitumen must be exuded from all laps.</p>				
2	SCOPE OF APPLICATION				
2.1	<p>Partial Strip-up - Removal of Overlay to Existing Vapour Control Layer: This specification is based on the removal of an existing overlay system back to the underlying bituminous air and vapour control layer only.</p>				
2.2	<p>Deck and Substrates - Existing BUR on Exterior Grade Plywood: This specification is suitable for application to a substrate of an existing prepared BUR felt system on a class 3, exterior grade plywood roof deck, not exceeding 5° from the horizontal.</p>				
2.3	<p>Day/Night Joints: The contractor must ensure at the end of each working day or period, that any exposed membranes or substrates that are susceptible to damage through water ingress are sealed with a Langley system compatible membrane to ensure complete water tightness. No loose laid membranes or other such covers are permitted.</p>				

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No.	Item	Unit	Qty	Rate	Total
2.4	U-value - Tapered Insulation: To comply with Part L of the current Building Regulations, the average thickness of the scheme included in this specification is calculated in accordance with Annex E of EN ISO 6946: 2017. This is to ensure that the effective thickness of the scheme is sufficient to meet the target U-value of 0.18W/m ² K.				
2.5	Contractors Note - Tapered Insulation: The specified tapered insulation scheme is based on the assumption that the contours of the underlying substrate reflects that of the existing roof coverings. In the event of any abnormalities being uncovered, it is the responsibility of the Roofing Contractor to report these immediately to Langley so that any amendments to the insulation scheme that may be necessary can be made. This may result in a delay. No claims arising from any additional costs incurred from such delays will be entertained by Langley Waterproofing Systems Ltd.				
3	PREPARATION				
3.1	Contractor Preparation Note: The contractor is to carry out his own inspection to satisfy himself with regard to the extent of works involved in stripping up the current overlay system and subsequent preparation of the exposed waterproofing coverings and substrates. No claims arising from failure to do so will be considered by Langley Waterproofing Systems Ltd.				
3.2	Damp-proof Courses / Cavity Trays - Requirement: Where tops of new waterproof skirtings will be above the line of the existing damp-proof course or cavity tray, it is a requirement that the contractor makes suitable provision to renew and raise these to a higher level. The contractor must liaise with, and seek separate instruction from the client contract administrator as to the method of raising these details. Claims arising from failure to seek client instruction prior to commencement of works or provide suitable cost provision for this item will not be entertained by Langley Waterproofing Systems Ltd.				
3.3	Edge Protection - Existing Fixed Handrail - Discard: Remove and dispose of to suitable approved waste containers / facilities or return to contractors premises for safe disposal. Make good all holes to substrates and surfaces and prepare as necessary ready for the proposed waterproofing system.				
3.4	Fixed Access Ladder/s - Temporary Removal: To facilitate the re-roofing works. The contractor is to remove set aside and safely store for re-use upon completion of the new waterproofing system.				

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No.	Item	Unit	Qty	Rate	Total
3.5	Air Conditioning & Air Handling Units - Free Standing - Temporary Removal: All roof mounted AC / AH Units and associated equipment. Temporarily remove and set aside or support clear of roof surface for the duration of the roofing works. Reinstate on completion. Allowance must be made for the following items: 1. Disconnection, de-gassing and re-connection, adaptation of all pipework, supports, connections, electrical connections and cabling. 2. Relocating to suitable locations as required, including all adaptations/adjustments and fixings required, all in accordance with client's detailed requirements. 3. Certified as fully serviceable on completion.				
3.6	Cable Trays - Temporarily Remove: To facilitate the works, temporarily remove all cable trays and/or associated items and set aside. Allow for replacement/renewal of any missing or damaged items. Reinstate on completion (detailed elsewhere).				
3.7	Wall Mounted Plant, Cables / Cable Trays / Conduits etc - Reposition (above skirting height): All wall mounted services and/or plant that will prevent facilitation of the works or will penetrate the new skirting heights. Raised and/or relocate. Allowance must be made for the following items as necessary: 1. Disconnection, de-gassing and re-connection, adaptation of all pipework, supports, connections, electrical connections and cabling. 2. Reposition (above skirting height) or relocate to suitable locations as required. Allow for all adaptations/adjustments and fixings required and re-connection. All in accordance with client's detailed requirements. 3. Certify as fully serviceable on completion.				
3.8	Cables - Temporarily Remove: All cables must be carefully raised and/or temporarily supported clear of the roof surface to facilitate the works.				
3.9	Existing Outlets - Refurbish with ParaFurb Outlets: Make ready to accept new ParaFurb Refurbishment Outlets (detailed elsewhere). Where necessary, cut back and remove sufficient existing waterproofing from around the outlets and as required from the surrounding area to allow for correct installation. Important Note: ParaFurb Outlets must not be installed to outlet positions that already have an existing refurbishment outlet in place. Prior to ParaFurb Outlets being installed, any existing refurbishment outlets or lead sleeve inserts must first be removed and surrounding substrates made good.				

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No.	Item	Unit	Qty	Rate	Total
3.10	Existing Waterproofing System - Remove to Existing Air and Vapour Control: Strip and remove to suitable waste containers all component layers of the existing waterproofing system including perimeter details such as skirtings, drips, flashings, aprons, collars etc. and any insulation that may be found, back to but not including the original bituminous air and vapour control layer.				
3.11	Existing Edge Trims - Remove: Carefully remove all existing perimeter edge trims and dispose of to suitable approved waste containers / facilities or return to contractors premises for safe disposal.				
3.12	Existing Edge Trims - Remove: Carefully remove all existing perimeter edge trims and dispose of to suitable approved waste containers / facilities or return to contractors premises for safe disposal.				
3.13	Existing Flashings / Termination Bars etc. - Remove: Carefully remove all existing secondary cover flashings, termination bars etc. and dispose of to suitable approved waste containers / facilities or return to contractors premises for safe disposal.				
3.14	Water Checks - Existing - Raise: Raise perimeter check kerbs to accommodate any presented increased height of the new waterproofing system. The contractor must ensure that a 50mm minimum height is achieved above the finished level of the new roofing system. Important Note: Should the roof height exceed 18m from ground level, Langley Waterproofing would recommend that a non-combustible material is used to raise the perimeter edges accordingly. Any deviation from this proposal must be approved by the client and/or local authority building control before works proceed.				
3.15	Perimeters - Raising - Cover of External Faces: Where the height of external faces are to be increased, for whatever reason, any exposed hard edge material or voids must be covered with new fascia boards or cladding. This must align with the top of the perimeter hard edge prior to fixing any drip batten or edge trims. The contractor must liaise with, and seek separate instruction from, the contract administrator as to the method, type and colour of materials, etc. to cover these external raised details. Claims arising from failure to seek client instruction prior to commencement of works or provide suitable cost provision for this item will not be entertained by Langley Waterproofing Systems Ltd.				
3.16	Redundant Chases - Make Good: Rake out and prepare any redundant chase lines. In-fill with sand and cement mortar, flush with wall face.				
3.17	Upstands - New Chase: In preparation of a new cover flashing the contractor is to cut a new chase to a minimum 25mm depth and at a minimum height of 150mm above the intended finished roof level surface. Brush clean and prime with appropriate primer to seal substrate.				

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No.	Item	Unit	Qty	Rate	Total
3.18	Existing Render - Alteration: The existing render is to be cut back to allow a new chase line to be cut at a higher level to accommodate the new levels presented by the new waterproofing system. The new chase must be cut with an angle grinder cutting disc to a minimum depth of 25mm, brushed clean and primed with appropriate primer to seal the substrate surface.				
3.19	Redundant Penetrations - Remove: The contractor must identify all redundant penetrations and carefully remove and dispose to suitable waste container. Make good holes in deck / substrate surface. The contractor must liaise with, and seek separate instruction from, the client contract administrator as to which items are deemed redundant and safe for removal. Claims arising from failure to seek client instruction prior to commencement of works or provide suitable cost provision for this item will not be entertained by Langley Waterproofing Systems Ltd.				

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No.	Item	Unit	Qty	Rate	Total
3.20	<p>Hot Flues & Pipes Insulating Double Skin: Independent non-ferrous metal sleeves with integral flange. Sleeve must be a minimum 150mm above finished roof surface. Flange must be a minimum 100mm wide. Fix to roof deck. Sleeve must provide a minimum 25mm air gap.</p> <p>Note: The gap can be filled with a non-combustible insulation.</p> <p>Important Notes:</p> <ol style="list-style-type: none"> 1. The contractor should assume all flues, or suspected flues, are live until confirmed otherwise. 2. If a flue is suspected the contractor should include the cost for a Gas Safe registered engineer to undertake all necessary works. 3. The contractor should undertake a risk assessment, for the required works, not only for the safety of the inhabitants of the property but also for that of staff. 4. Flues are controlled services as defined in Building Regulations Part J. Any work to flues may be notifiable building work; if there is any doubt as to whether works are notifiable then the relevant building control department, or Approved Inspector, should be contacted for clarification. 5. Any boiler vents and gas flues that are currently active should be isolated before roofing works proceed. If a previously unidentified, or suspected, flue is discovered then works should stop until the flue can be confirmed as isolated and inactive. 6. The contractor is to carry out their own checks and inspections to satisfy themselves that the roof areas are safe to access and do not present a risk of harmful gases. 7. Flue extension must be of the correct material and same diameter or correct cross-sectional area to match the existing. 8. Flues must be securely fixed and sealed to the existing to comply with all relevant regulations and standards. 9. If you suspect that gas safety has been compromised (e.g. a flue has been disturbed or damaged) then works are to stop until safety can be confirmed. 				
3.21	<p>Priming - Existing Bituminous AVCL & All Substrates For New Bituminous Membranes: Bituminous surfaces and all substrates (including insulation) which are to receive new bituminous membranes must be swept clean of all dirt, debris and loose material. In addition, all surfaces must be dry. Prime with Langley Spray-on (synthetic rubber) Primer and allow to dry.</p>				
3.22	<p>Flame-free Zones - Priming Requirement - All Surfaces (Inc Insulation if applicable): Prime all flame-free zone surfaces with Langley Spray-on (synthetic rubber) Primer and allow to dry (bituminous primer must not be used).</p>				

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No.	Item	Unit	Qty	Rate	Total
3.23	Flame-free Zones - Self-adhesive Membranes - Additional Priming: Adhesion issues may arise when applying membranes with a hot-air gun. Langley Spray-on Primer can be applied to the surface Paradiene SA underlay to enhance adhesion of the Parafor Solo SA cap sheet. This 'additional priming' is also recommended when the Langley SA Membrane Detailing System is specified as the primary roof covering or over large areas. This will ensure a consistent bond across larger roof areas and improve application times				
4	AIR AND VAPOUR CONTROL				
4.1	Air and Vapour Control Layer - Torch-on - Field Area: Install Parevapo SBS metal-lined, double reinforced, elastomeric air and vapour control layer. Top Face: Sanded. Underside: Macro perforated fusible film. Fully bond to prepared surface by torch-on method. Side and end laps to overlap by a minimum of 75mm and must be fully sealed by torch-on method.				
4.2	Flame-free Zones - Air and Vapour Control Layer - Change of Membrane - Flat Exclusion Area: Install Parevapo SA, double reinforced, metal-lined, self-adhesive SBS elastomeric bitumen air and vapour control layer. Fully bond to a prepared and primed substrate by means of the heat activated, self-adhesive face, applying pressure with a weighted roller. Side laps, minimum 75mm, end laps, 100mm, fully bond by heat welding with a hot-air gun and applying pressure with a seam roller. Priming of substrate must be with Langley Spray-on (synthetic rubber) Primer (bituminous primer must not be used). All heat activation and welding within the flame-free zone must be carried out with a hot-air gun. Note: All laps with main area AVCL, (outside the flame-free zone) must be minimum 150mm and torch bonded.				
4.3	Air and Vapour Control Layer - Non-combustible Detail Skirtings: Extend the air and vapour control layer as a separate flashing piece cut from full width of roll to the skirting. Fully bond by torch-on method to a fully prepared surface to a minimum height of 100mm past the finished proposed line of the new insulation level. A minimum of 100mm lap must be achieved to main field return. Side laps to be a minimum of 75mm and must be fully sealed by torch-on method.				
4.4	Flame-free Zones - Air and Vapour Control Layer - All Upstands, Skirtings & Details Generally: Extend Parevapo SA air and vapour control layer to the skirting / details as a separate flashing piece, cut from the width of a roll. Fully bond to a prepared and primed substrate by means of the heat activated self-adhesive face. Minimum height, 100mm above the finished height of the new insulation (or the full girth of details). Priming of substrate must be with Langley Spray-on (synthetic rubber) Primer, (bituminous primer must not be used). Lap to main field return, minimum 100mm, side laps minimum 75mm. Application method as per the main area. Detailing arrangements all as main specification.				

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No.	Item	Unit	Qty	Rate	Total
5	INSULATION				
5.1	Parafoam Ultra Tapered Board Insulation - Field Area: Install Tapered Parafoam Ultra Polyisocyanurate (PIR) roof insulation board. CFC/HCFC-free with zero ODP. Set out in accordance with tapered scheme drawings supplied by Langley Waterproofing Systems Ltd. Boards to be close butted with staggered joints.				
5.2	Parafoam Ultra Tapered Insulation Scheme - Sumps to Outlet Positions: Sumps to be a minimum of 500mm x 500mm square around outlet position. Form with Parafoam Ultra Polyisocyanurate (PIR) flat board insulation. Board thickness in accordance with Tapered Scheme drawing. A Langley Metal Hard Edge to be fixed to all exposed insulation edges. Bond to insulation with either low foaming PU adhesive or strapping with suitable fully bonded underlay membrane.				
5.3	Parafoam Ultra Insulation - PU Attachment: To prepared surface. Bond insulation with LangStik Solvent Free PU Adhesive. Surface of substrate must be swept clear of all dirt, debris and loose material, prior to application of the adhesive. Boards to be laid close butted with staggered joints. Note: For further information, please refer to 'Fixing Instructions' section of this specification.				
5.4	Parafoam Ultra Insulation - Dual Layer Applications: Where thicknesses in excess of 150mm are specified the contractor must allow for the installation of a second layer of boards and the additional adhesive required. All boards to be laid close butted with staggered joints with the top layer off-set from the preceding one.				
5.5	Insulation - PU Attachment - Flame-free Zones: When using Parevapo SA, in designated flame-free zones, the insulation to these areas must be bonded with LangStik Solvent Free PU Adhesive. Surface substrate must be swept clear of all dirt, debris and loose material, prior to application of the PU adhesive.				
5.6	Insulation - Changes of Levels - Metal Hard Edge: Langley Metal Hard Edge to be fixed to all exposed insulation edges. Bond to insulation with either low foaming PU adhesive or strapping with suitable fully bonded underlay membrane.				
5.7	Priming - Hard Edges to Insulation: All hard edges, metal and/or timber, must be primed with Langley Spray-on (synthetic rubber) Primer and allow to dry.				
5.8	Surface Condensation/Moisture - Application Warning: Contractor to ensure that the surface of the insulation is free of surface condensation/moisture prior to the application of the waterproofing system. Important Note: Surface condensation/moisture is particularly prevalent during cold months and during extreme hot weather.				

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No.	Item	Unit	Qty	Rate	Total
6	WATERPROOFING - UNDERLAYS				
6.1	Detail Reinforcing Strip - Requirement in Lieu of Angle Fillets: Paradiene M3 S detail reinforcing strips must be fixed at the base of all upstands, prior to subsequent membranes being installed. At a minimum of 250mm width cut from roll, apply 125mm to the horizontal and 125mm to vertical prepared surfaces. Fully bond by torch-on method.				
6.2	Flame-free Zone - Detail Reinforcing Strip - Change of Membrane: Paradiene SA detail reinforcing strips must be installed at the base of all upstands, prior to subsequent membranes being installed. Strips to be minimum 250mm wide in pieces cut from roll, applied 125mm to the horizontal and 125mm to vertical surfaces. Fully bond to a prepared (and primed if applicable) substrate by means of the heat activated self-adhesive face, applying pressure with a seam roller. Where priming is required, it must be with Langley Spray-on (synthetic rubber) Primer, (bituminous primer must not be used).				
6.3	Underlay - Self-Adhesive - Field Area: Adepar JS VV glass fibre reinforced, SBS elastomeric bitumen membrane. Top Face: fusible film. Underside: sanded between self-adhesive strips with siliconised peel-off film over self-adhesive selvedge. Fixing: by means of factory-applied self-adhesive strips. Perimeters and Openings: 500mm wide, fully bond by torching. Side Lap: 80mm determined by selvedge. End Lap: minimum 120mm. Note: The siliconised film is not fusible. Fixing Method: See Fixing Instructions. Note: 5-10mm bead of bitumen must be exuded from all laps.				
6.4	Flame-free Zone - Underlay - Change of Membrane - Flat Exclusion Area: Install Paradiene SA, polyester reinforced, self-adhesive SBS elastomeric bitumen membrane. Fully bond to a prepared and primed substrate by means of the heat activated self-adhesive face, applying pressure with a weighted roller. Side laps, minimum 75mm; end laps, minimum 100mm; fully bonded by heat welding with a hot-air gun and applying pressure with a seam roller. Priming of substrate (including insulation if applicable) must be with Langley Spray-on (synthetic rubber) Primer (bituminous primer must not be used). All heat activation and welding within the flame-free zone must be carried out with a hot-air gun. Note: All laps with main area underlay, (outside the flame-free zone) must be minimum 150mm and torch bonded.				
6.5	Underlay - Upstands & Skirtings: To be formed separately using Paradiene M3 S underlay. Cut from the width of the roll and fully bond by torching to base membrane with a minimum 100mm lap. Both surfaces being bonded must be heated and a bead (5-10mm) of bitumen extruded from all head and side laps.				

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No.	Item	Unit	Qty	Rate	Total
6.6	Flame-free Zone - Underlay - Upstands & Skirtings - Change of Membrane: To be formed separately with Paradiene SA underlay, in pieces cut from the width of a roll. Fully bond to a prepared and primed substrate (or AVCL if applicable) by means of the heat activated self-adhesive face, applying pressure with a roller. Minimum height, 150mm above the finished height of the new insulation (or the full girth of details). Where applicable, priming of substrate must be with Langley Spray-on (synthetic rubber) Primer (bituminous primer must not be used). Lap to main field return, minimum 100mm; Side laps, minimum 75mm. Application method as per the main area. Detailing arrangements all as main specification.				
6.7	Underlay to Outlet Sumps & Internal/Integral Gutters: Paradiene M3 S underlay (fully bonded) must be used (detailed elsewhere). Extend onto main field area by minimum 150mm.				
7	WATERPROOFING CAP SHEETS				
7.1	Cap Sheet - Torch-on - Field Area: Install Elastoflex GS cap sheet. Elastoflex GS is a torch-on polyester-reinforced, SBS-modified elastomeric bitumen membrane. The surface has a Dark Grey granulated surface with a grooved thermofusible film underside. Lay: Fully bonded by torching with 90mm minimum side lap width as determined by the selvedge. Minimum end laps must be 150mm. This layer is to be laid parallel to the under layer, breaking joints by at least 300mm. Both surfaces being bonded must be heated and a bead of bitumen exuded from all laps.				
7.2	Flame-free Zone - Cap Sheet - Change of Membrane - Flat Exclusion Area: Install Parafor Solo SA, polyester reinforced, self-adhesive, SBS elastomeric bitumen, dark grey granule faced cap sheet. Fully bond to the underlay by means of the heat activated self-adhesive face, applying pressure with a weighted roller. Side laps to suit selvedge (minimum 75mm); end laps, minimum 150mm; fully bond by heat welding with a hot-air gun and applying pressure with a seam roller. A 5-10mm bead of bitumen must be extruded from all laps. All heat activation and welding within the flame-free zone must be carried out with a hot-air gun. Note: All laps with main area cap sheet, (outside the flame-free zone) must be minimum 150mm and torch bonded.				
8	DETAILS				
8.1	Perimeter Kerb Detail - Requirement: All perimeter kerb details must be a minimum of 50mm above the finished roof surface level.				

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No.	Item	Unit	Qty	Rate	Total
8.2	Detail Skirtings & Upstands - Requirement: All detail skirtings and upstands must be a minimum of 150mm above the finished horizontal roof surface level, including any paving, ballast, green roof coverings etc. Important Note: If the required height cannot be achieved for any reason, then the details below 150mm will not be covered by the Langley Waterproofing guarantee				
8.3	Cap Sheet - General Detailing: Detail flashings. Form separately with Elastoflex GS Cap Sheet cut from width of roll. Colour to match main field membrane. Fully bond by torching to the specified detail underlay membrane. Both surfaces being bonded must be heated and a 5-10mm bead of bitumen extruded from all head and side laps. Cap sheet detail must extend to a minimum of 150mm onto the main field area. Upstand heights must be a minimum of 150mm above the finished roof level.				
8.4	Flame-free Zone - Cap Sheet - General Detailing - Change of Membrane: Detail flashings to be formed separately using matching colour Parafor Solo SA Cap Sheet, in pieces cut from width of roll. Fully bond to the specified detail underlay by means of the heat activated self-adhesive face, applying pressure with a roller. Minimum height, 150mm above the finished height of the new system (or the full girth of details). Side laps to suit selvedge; end laps, minimum 150mm, bond by heat welding with a hot-air gun and applying pressure with a seam roller. A 5-10mm bead of bitumen is to be extruded from all laps. Lap to main field return, minimum 150mm.				
8.5	Drainage - Outlet Sumps: See Underlay section of this specification for sump underlay membrane specification. At change in level from field area to sump the underlay should be dressed over the hard edge, down the face of the field area insulation and lap onto the AVCL to form a bund. An additional section of underlay should also be dressed across the top of the sump insulation, up the change in level and lap onto field area underlay by a minimum 75mm on either side of the sump. At the outlet opening the underlay should be dressed down the face of the insulation and lap onto the AVCL. Base of sump upstand to be reinforced with the appropriate detail underlay (see Detail Reinforcing Strip in Underlay section of specification) prior to installation of cap sheet. Side and end laps to be a minimum 75mm.				
8.6	Internal Drainage - ParaFurb Outlets: ParaFurb Outlet: Stainless Steel spigot with Ribseal gasket and SBS membrane flange. Select outlet to suit diameter/s of fall pipes. Fully bond flange membrane to previously installed underlay (see Underlay section for sump membrane specification) or soaker. Fully bond cap sheet over and cut hole to suit diameter of pipe. Install leaf guard/grating supplied. Installation to be in accordance with Langley fixing instructions.				

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No.	Item	Unit	Qty	Rate	Total
8.7	Flues and Hot Pipes with Integral Insulating Double Skin: New, code 5 lead pipe sleeve/s with integral flange. Sleeve minimum 150mm high, flange minimum 100mm wide. Prime both surfaces of the flange and fully bond between underlay or soaker and cap sheet. Top of sleeve: Protect with a weathering collar, securely fixed to pipe Base of Sleeve. Colour, black.				
8.8	Counter Flashing - ParaFlash B3: Install and protect detail abutment skirtings with ParaFlash B3 lead-free counter flashings 150mm wide. Dress into prepared chase and wedge at 450mm centres with stainless steel clips provided. Point with Langley Gap-Seal Mastic. Side laps to be a minimum of 100mm and sealed with Langley Gap-Seal Mastic.				
8.9	Kerbs - ParaTrim GRP Edge Trim: Base layer and detail cap sheet layer of new waterproofing system must be carried up the vertical inner face and across the top of the kerb detail, which must be, in all cases, fully supported. Where required, at the ends of the kerbs, the waterproofing must be turned up and to the side to allow weathering with new horizontal and vertical cover flashings. Terminate to leading edge with a new ParaTrim GRP edge trim of an appropriate profile for the site conditions applied over the base layer membrane. Screw fix at maximum 300mm centres to the substrate. Pre-formed corner units must be used on all internal and external angles. Butt straps are to be inserted at all joints. Surfaces of trim in contact with membranes must be wiped clean and primed with Langley Spray-on Primer and allowed to dry before cap sheet termination piece installed. Note: Exposed costal locations require the use of stainless steel fasteners and securement at more frequent centres maximum 150mm.				
9	SAFETY SYSTEMS				
9.1	Free-standing Permanent Guardrail System: New LangGuard Free-standing Permanent Guardrail System to be installed to the entire exposed perimeter of the completed roof. The guardrail systems shall be designed, tested, inspected, and marked to ensure it meets performance requirements and safety factors specified in BS 13700:2021. The system shall allow for safe access and egress and include suitable, secure access gates where required.				
9.2	LangGuard - Standards: All posts, rails, bases and fittings are galvanised to BS EN ISO 1461. Fully tested to Health and Safety Specialist Report 15 September 1988, 'Handrails - Maintenance Uses Only', BS6399 Buildings and Loads. See LangGuard Data Sheet DsA2 0119 for further information.				
9.3	LangGuard - Base Plates: Supporting Base Plates (with integrated bonded ribbed rubber mat): To sit flat on the roof surface.				

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No.	Item	Unit	Qty	Rate	Total
9.4	LangGuard - Installation: To be installed, checked and certified by Langley Waterproofing Systems Ltd.				
10	COMPLETION				
10.1	Guarantee Requirement - Final Inspection: In accordance with our guarantee requirements, Langley Waterproofing Systems Ltd are to be notified once all works are complete. A final inspection will then be undertaken by us and the contractor must ensure that safe working access is provided.				
10.2	Access Ladder/s - Existing Re-fix: Re-fix. The contractor is to allow for any modifications/adaptations necessary to accommodate the new roofing system finished levels. Where possible, fixing points are to be designed to avoid penetrating the waterproofing system.				
10.3	Plant and Equipment - Free Standing - Reinstatement: All free-standing roof mounted plant and items of equipment must be placed on load-spreading slabs on sacrificial pieces of loose laid cap sheet, mineral surface down.				
10.4	Sacrificial Layers - Free-standing Plant / Handrails etc: All freestanding items. Install a sacrificial layer of cap sheet (granule surface down) under all load spreading supports / pads.				
10.5	Cables - Reinstate: Collate and support on cable trays if necessary. Secure cables to tray or to original locations and secure with plastic cable ties. If cable trays are used then they are to be rested on load-spreading bases on sacrificial pieces of cap sheet. Securely fasten trays to bases as required.				
10.6	Rainwater Outlets - ParaFurb Outlets: Check for blockages. Clear if necessary and leave in a free-running condition. Ensure Ribseal (where present) is tightly secured to form correct pressure seal to pipe/s for applicable units. Ensure all supplied leaf guards are in place and tightly secured.				
10.7	Completed Roof Surface - General: Ensure visual inspection of all laps is undertaken to confirm integrity of system prior to final guarantee inspection. Sweep, clean and remove debris to suitable waste container.				
10.8	Arisings from Works: Remove from site all arisings for return to contractor storage or safe disposal.				

Detailed Specification: 2

Roof Area 02 & 03

No.	Item	Unit	Qty	Rate	Total
1	SPECIFICATION REQUIREMENTS				
1.1	Guarantee: The following TA-25-W specification is to be covered by the Langley Waterproofing Systems Ltd, single-premium, pre-paid independently-insured workmanship and materials guarantee for a period of 25 years from the date of practical completion. In order to meet this requirement only roofing contractors that participate in this guarantee scheme may be used. The eligibility of proposed roofing contractors should be confirmed with Langley Waterproofing Systems Ltd, Tel: 01327 704778 prior to inviting tenders.				
1.2	Summary of Works: Strip existing waterproofing and defective insulation to reveal original AVCL. Prepare and prime AVCL ready to receive new waterproofing system. Install new Langley TA-25 RBM felt waterproofing system incorporating tapered Parafoam Ultra PIR insulation.				
1.3	Projects Under CDM: In relation to this project, under Construction (Design and Management) Regulations 2015 (CDM 2015) ensure that all duties are met as detailed here https://www.hse.gov.uk/construction/cdm/2015/summary.htm				
1.4	Rooflights - Guarantee or Warranty (As Applicable): The Langley Rooflights specified in the following document will be covered by the same insurance-backed guarantee (IBG) or product-only warranty provided by Langley Waterproofing Systems Ltd. It will be effective for the same duration as the waterproofing system guarantee or warranty from the date of practical completion. Certain industry standard term limitations may apply to the individual components of specialist, bespoke, and structural units. Please ask for more details				
1.5	Roof Drainage - Guarantee Requirement - CCTV Inspection: Prior to works commencing and after practical completion; any existing external rainwater systems or internal outlet drainage points must be checked for blockages and cleared as necessary by the roofing contractor. In addition, it is a requirement that should internal drainage pipes exist, that they are inspected using CCTV technology to confirm their integrity and serviceability prior to the commencement of any works.				
1.6	Design Note - Warm Roof: This specification is based on a warm roof construction. The principal thermal insulation is above the structural deck.				

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No.	Item	Unit	Qty	Rate	Total
1.7	<p>Design Note - Existing Falls: Overlay of any existing roof system or deck. The new system will follow the existing falls and any deviations will be replicated. As a result, some areas of standing water may occur.</p> <p>However, please note the accumulation of ice, snow or ponding water will not have an adverse effect on the Langley products specified. This applies to both the life expectancy and/or long-term performance of the system specified and will not affect, in any way, the guarantee status.</p>				
1.8	<p>Tapered Insulation: When preparing a tapered scheme, a flat and level deck is assumed and, although the tapered scheme is intended to provide adequate drainage, some ponding may still occur due to obstructions, membrane lap build-ups or unforeseen deck deflection.</p> <p>Please note that neither ice, snow or ponding water will have an adverse affect on the Langley products specified. This applies to both the life expectancy and long-term performance of the system and will not affect in any way, the guarantee status.</p>				
1.9	<p>Design Note - Changes & Adjustments: Variations 'A' (general): Any variations must be agreed in writing by both the contract administrator and Langley Waterproofing Systems Ltd. These must be costed and authorised by the client but not be implemented until instructed by the client. Variations 'B' (minor): During work in progress, Langley Waterproofing Systems Ltd must be informed immediately of any proposed change/s and operatives must not implement any change/s until agreed by Langley (minor changes are deemed to be any item not falling within the scope of section A). Unauthorised Changes 'C' (general): Langley Waterproofing Systems Ltd will not be responsible for any changes of which they are unaware or have not authorised, nor will they accept any liability or associated costs due to system failure, i.e. labour, materials, design or programme delays, etc., resulting from said changes.</p>				

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No.	Item	Unit	Qty	Rate	Total
1.10	<p>Design Note - Approved Document Part B Building Regulations - Compartmented Walls:</p> <p>Overlaying Existing Waterproofing/Substrate:</p> <p>Where the Langley Waterproofing system bridges a compartmented wall, it is expected that the existing underlying system is laid on a substrate or deck rated class A2-s3, D2 or better (non-combustible) to BS EN 13501-1.</p> <p>Some buildings (Hotels, boarding houses, residential colleges, residence halls, hostels, offices, assembly and recreation buildings) no taller than 15m are permitted to have a roof deck classified as Euroclass B-s3, D2 or worse (combustible). However, to comply with Approved Document Part B, additional fire stopping will be required underneath the roof deck. Because of the reduced resilience to fire, thermoplastic insulation materials (XPS, EPS) can only be used within the 1500mm zone on either side, and over the compartment wall when the deck is rated class A2-s3, D2 or better (non-combustible) to BS EN 13501-1.</p> <p>Double-skinned insulated roof sheeting, such as standing seam or profile metal sheet roofing, should incorporate a band of material rated class A2-s3, D2 or better, a minimum of 300mm in width, centred over the wall.</p> <p>Note: Proposed specification and design will be subject to LABC (Local Authority Building Control) or assigned AI (Approved Inspector) approval before works can commence on-site. Where appropriate, Langley Waterproofing can offer support and guidance to assist application.</p>				
1.11	<p>Roof Structure - Disclaimer:</p> <p>It is deemed the responsibility of the Client Representative, Contractor and/or Property Owner to give due consideration towards the ability of the existing roof deck accepting any additional loadings imposed by the application of the new waterproofing system proposed within this specification. Langley Waterproofing Systems Ltd will not be held responsible or accept any liability or associated costs should structural defects or structural failure occur.</p>				
1.12	<p>Electronic Roof Integrity Test & Root Protection (Compulsory For Buried Systems) - Disclaimer:</p> <p>Should the roof waterproofing system receive any subsequent coverings such as an inverted roof system, green roof system, paving slabs, ballast, decking, or similar, an electronic leak detection (ELD) test must be carried out by a qualified expert to confirm the waterproofing system integrity.</p> <p>You must also ensure an ELD is completed if the roof will receive a PV panel installation.</p> <p>You must ensure a record of this ELD test, and any repairs completed, is shared with Langley.</p> <p>Where appropriate, a root resistant membrane must be installed to protect the Langley waterproofing system from root penetration.</p>				

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No.	Item	Unit	Qty	Rate	Total
1.13	Fire Risks: This specification has been formulated with due regard to the inherent risks of fire when using hot work flat roof waterproofing systems and application methods. To the best of our knowledge any potential hazards have been identified and the specification tailored to minimise the risk of accidental ignition occurring. Notwithstanding the foregoing, the contractor / installer is reminded that they have a duty of care and responsibility to carry out their own assessment of the proposed works with regard to the potential fire risk, and introduce working practices that takes any such risks into account. Should the contractor / installer have any reservations about any aspect of the specification proposal, or if during the course of the works any unforeseen items are discovered that present an actual or potential fire risk, they should contact Langley Waterproofing Systems Ltd immediately so that safer methods can be agreed and implemented which do not compromise the integrity of the specification and or its guarantees.				
1.14	Fire Risk - Drying Out: In the event of the roof being/becoming wet and drying out is necessary, the use of gas torches is not recommended and should be avoided. In all cases Safe2Torch guidelines should be followed. Standing water should be swept to the nearest outlets with a broom or squeegee (care must be taken to avoid debris blocking outlets). The remaining moisture should be soaked up using mops or dry rags and the surface left to dry out naturally. To speed up the process, specialist equipment is commercially available, see 'General Guidance & Requirements' in the appendices of this specification.				
1.15	Safe2Torch - Flame-free Zones: This specification has been compiled in accordance with the NFRC Safe2Torch guidance and includes areas that have been identified as presenting a risk of fire if gas torches are used. This requires the substitution of membranes in these areas.				
1.16	Flame-free Zones - Definition: A Flame-free Zone is defined as being within 900mm of a combustible substrate / material. Note: If combustible material forms part of an overhang then the Flame-free Zone starts from the extremity of the overhang.				
1.17	Risk Assessment - Fire - Installing Contractor: In line with their own Risk Assessment and Method Statement, the installing contractor is to identify any areas where the use of a naked flame is deemed too great a risk. This matter should be raised at the pre-start / pre-commencement meeting or stated in writing to Langley in order that an alternative flame free method can be adopted and specified.				

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No.	Item	Unit	Qty	Rate	Total
1.18	<p>Flame-free Zones - Identified Risk Areas: In accordance with Safe2Torch guidance the following area/s have been designated as 'flame-free' zone/s:</p> <p>Detail Noted: Plywood Encapsulated Parapet (SA AVCL ONLY) Detail Noted: Rooflight Openings (FULL SA) Detail Noted: Plant Openings (FULL SA) Detail Noted: Upstand to Tank House (FULL SA) - If Applicable Detail Noted: Tank House Opening (FULL SA) - If Applicable Detail Noted: Expansion Joint (FULL SA)</p> <p>Whilst these area/s have been identified, they may not be definitive. Due allowance must be made so that at any stage of this project, should any additional areas be designated a fire risk by any of the parties involved, they must be logged, all parties informed, and the appropriate measures employed.</p>				
1.19	<p>Fire Accreditation: Unless otherwise stated, the full waterproofing system and/or products contained within this specification have been tested for external fire exposure (both with and without insulation) in accordance with BS EN 13501-5: 2005 (European Test) and are accredited as Broof(t4).</p>				
1.20	<p>Langley Detailed Drawings: This specification is to be read in conjunction with detailed drawings issued and supplied by Langley Waterproofing. Should the contractor at any point find discrepancies between the issued specification and issued drawings, it is required that the specification takes precedence in all cases, unless otherwise notified and approved. No additional costs or liability arising from failure to follow specification or notifying Langley Waterproofing Systems Ltd of any discrepancies found in good time prior to commencement of works will be considered.</p>				
1.21	<p>Guarantee Requirement - Torch-on & Hot Air Applied Membranes: Applicable to all layers. A 5-10mm bead of bitumen must be exuded from all laps.</p>				
2	SCOPE OF APPLICATION				
2.1	<p>Partial Strip-up - Removal of Overlay to Existing Vapour Control Layer: This specification is based on the removal of an existing overlay system back to the underlying bituminous air and vapour control layer only.</p>				
2.2	<p>Deck and Substrates - Existing BUR on Exterior Grade Plywood: This specification is suitable for application to a substrate of an existing prepared BUR felt system on a class 3, exterior grade plywood roof deck, not exceeding 5° from the horizontal.</p>				
2.3	<p>Day/Night Joints: The contractor must ensure at the end of each working day or period, that any exposed membranes or substrates that are susceptible to damage through water ingress are sealed with a Langley system compatible membrane to ensure complete water tightness. No loose laid membranes or other such covers are permitted.</p>				

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No.	Item	Unit	Qty	Rate	Total
2.4	U-value - Tapered Insulation: To comply with Part L of the current Building Regulations, the average thickness of the scheme included in this specification is calculated in accordance with Annex E of EN ISO 6946: 2017. This is to ensure that the effective thickness of the scheme is sufficient to meet the target U-value of 0.18W/m ² K.				
2.5	Contractors Note - Tapered Insulation: The specified tapered insulation scheme is based on the assumption that the contours of the underlying substrate reflects that of the existing roof coverings. In the event of any abnormalities being uncovered, it is the responsibility of the Roofing Contractor to report these immediately to Langley so that any amendments to the insulation scheme that may be necessary can be made. This may result in a delay. No claims arising from any additional costs incurred from such delays will be entertained by Langley Waterproofing Systems Ltd.				
3	PREPARATION				
3.1	Contractor Preparation Note: The contractor is to carry out his own inspection to satisfy himself with regard to the extent of works involved in stripping up the current overlay system and subsequent preparation of the exposed waterproofing coverings and substrates. No claims arising from failure to do so will be considered by Langley Waterproofing Systems Ltd.				
3.2	Damp-proof Courses / Cavity Trays - Requirement: Where tops of new waterproof skirtings will be above the line of the existing damp-proof course or cavity tray, it is a requirement that the contractor makes suitable provision to renew and raise these to a higher level. The contractor must liaise with, and seek separate instruction from the client contract administrator as to the method of raising these details. Claims arising from failure to seek client instruction prior to commencement of works or provide suitable cost provision for this item will not be entertained by Langley Waterproofing Systems Ltd.				
3.3	Edge Protection - Existing Fixed Handrail - Discard: Remove and dispose of to suitable approved waste containers / facilities or return to contractors premises for safe disposal. Make good all holes to substrates and surfaces and prepare as necessary ready for the proposed waterproofing system.				
3.4	Extractor Fans / Ventilators - Kerb Mounted - Temporary Removal: Carefully remove and set aside for re-fixing upon completion of the new waterproofing system. No equipment is to be stored during the course of the works on completed areas unless suitable protection has been provided beneath.				

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No.	Item	Unit	Qty	Rate	Total
3.5	Air Conditioning & Air Handling Units - Free Standing - Temporary Removal: All roof mounted AC / AH Units and associated equipment. Temporarily remove and set aside or support clear of roof surface for the duration of the roofing works. Reinstate on completion. Allowance must be made for the following items: 1. Disconnection, de-gassing and re-connection, adaptation of all pipework, supports, connections, electrical connections and cabling. 2. Relocating to suitable locations as required, including all adaptations/adjustments and fixings required, all in accordance with client's detailed requirements. 3. Certified as fully serviceable on completion.				
3.6	Cables - Temporarily Remove: All cables must be carefully raised and/or temporarily supported clear of the roof surface to facilitate the works.				
3.7	Existing Outlets - Refurbish with ParaFurb Outlets: Make ready to accept new ParaFurb Refurbishment Outlets (detailed elsewhere). Where necessary, cut back and remove sufficient existing waterproofing from around the outlets and as required from the surrounding area to allow for correct installation. Important Note: ParaFurb Outlets must not be installed to outlet positions that already have an existing refurbishment outlet in place. Prior to ParaFurb Outlets being installed, any existing refurbishment outlets or lead sleeve inserts must first be removed and surrounding substrates made good.				
3.8	Rooflight/s - Discard: Remove and dispose of existing rooflight/s to suitable waste facilities.				
3.9	Rooflight Kerb/s - Discard: Remove and dispose of existing rooflight kerbs to suitable waste facilities.				
3.10	Kerbs to Plant Openings - Repair and Raise: Inspect for deterioration. Repair and raise as necessary to achieve a minimum upstand height of 150mm above the finished level of the new waterproofing system.				
3.11	Tank House - Remove and Dispose: Upon clarification from CA, remove and dispose of Tank House to suitable waste facility.				

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No.	Item	Unit	Qty	Rate	Total
3.12	Redundant Tank House Openings - Cap with Ply and Discard Kerbs: Kerbs to be removed and disposed of to suitable waste facilities. Apertures to be decked over, flush with the surrounding decking with 18mm, class 3, exterior grade plywood, fixed on a supporting timber framework, with all edges supported, by means of non-corroding ring shank nails or screws at 150mm centres around the perimeters of the panels and 300mm centres along the supports. Plywood and its fixing should comply with the recommendations of Section 5.1.6 of BS 8217: 2005.				
3.13	Existing Waterproofing System - Remove to Existing Air and Vapour Control: Strip and remove to suitable waste containers all component layers of the existing waterproofing system including perimeter details such as skirtings, drips, flashings, aprons, collars etc. and any insulation that may be found, back to but not including the original bituminous air and vapour control layer.				
3.14	Existing Edge Trims - Remove: Carefully remove all existing perimeter edge trims and dispose of to suitable approved waste containers / facilities or return to contractors premises for safe disposal.				
3.15	Skirtings - Extend: Should exposed skirtings be insufficient in height, the contractor must make provision to extending them. Extend by providing a treated timber or class 3, exterior grade plywood substrate as necessary to accommodate the minimum required skirting height of 150mm above the finished roof surface level.				
3.16	Redundant Penetrations - Remove: The contractor must identify all redundant penetrations and carefully remove and dispose to suitable waste container. Make good holes in deck / substrate surface. The contractor must liaise with, and seek separate instruction from, the client contract administrator as to which items are deemed redundant and safe for removal. Claims arising from failure to seek client instruction prior to commencement of works or provide suitable cost provision for this item will not be entertained by Langley Waterproofing Systems Ltd.				
3.17	Soil Vent Pipe/s - Extend: Extend where necessary. Collar or pipe sleeve/s must be a minimum of 150mm above the finished roof surface. Note: Extension pipe/s must be fixed inside the existing pipe/s.				

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No.	Item	Unit	Qty	Rate	Total
3.18	<p>Hot Flues & Pipes Insulating Double Skin: Independent non-ferrous metal sleeves with integral flange. Sleeve must be a minimum 150mm above finished roof surface. Flange must be a minimum 100mm wide. Fix to roof deck. Sleeve must provide a minimum 25mm air gap.</p> <p>Note: The gap can be filled with a non-combustible insulation.</p> <p>Important Notes:</p> <ol style="list-style-type: none"> The contractor should assume all flues, or suspected flues, are live until confirmed otherwise. If a flue is suspected the contractor should include the cost for a Gas Safe registered engineer to undertake all necessary works. The contractor should undertake a risk assessment, for the required works, not only for the safety of the inhabitants of the property but also for that of staff. Flues are controlled services as defined in Building Regulations Part J. Any work to flues may be notifiable building work; if there is any doubt as to whether works are notifiable then the relevant building control department, or Approved Inspector, should be contacted for clarification. Any boiler vents and gas flues that are currently active should be isolated before roofing works proceed. If a previously unidentified, or suspected, flue is discovered then works should stop until the flue can be confirmed as isolated and inactive. The contractor is to carry out their own checks and inspections to satisfy themselves that the roof areas are safe to access and do not present a risk of harmful gases. Flue extension must be of the correct material and same diameter or correct cross-sectional area to match the existing. Flues must be securely fixed and sealed to the existing to comply with all relevant regulations and standards. If you suspect that gas safety has been compromised (e.g. a flue has been disturbed or damaged) then works are to stop until safety can be confirmed. 				
3.19	<p>Priming - Existing Bituminous AVCL & All Substrates For New Bituminous Membranes: Bituminous surfaces and all substrates (including insulation) which are to receive new bituminous membranes must be swept clean of all dirt, debris and loose material. In addition, all surfaces must be dry. Prime with Langley Spray-on (synthetic rubber) Primer and allow to dry.</p>				
3.20	<p>Flame-free Zones - Priming Requirement - All Surfaces (Inc Insulation if applicable): Prime all flame-free zone surfaces with Langley Spray-on (synthetic rubber) Primer and allow to dry (bituminous primer must not be used).</p>				

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No.	Item	Unit	Qty	Rate	Total
3.21	Flame-free Zones - Self-adhesive Membranes - Additional Priming: Adhesion issues may arise when applying membranes with a hot-air gun. Langley Spray-on Primer can be applied to the surface Paradiene SA underlay to enhance adhesion of the Parafor Solo SA cap sheet. This 'additional priming' is also recommended when the Langley SA Membrane Detailing System is specified as the primary roof covering or over large areas. This will ensure a consistent bond across larger roof areas and improve application times				
4	AIR AND VAPOUR CONTROL				
4.1	Air and Vapour Control Layer - Torch-on - Field Area: Install Parevapo SBS metal-lined, double reinforced, elastomeric air and vapour control layer. Top Face: Sanded. Underside: Macro perforated fusible film. Fully bond to prepared surface by torch-on method. Side and end laps to overlap by a minimum of 75mm and must be fully sealed by torch-on method.				
4.2	Flame-free Zones - Air and Vapour Control Layer - Change of Membrane - Flat Exclusion Area: Install Parevapo SA, double reinforced, metal-lined, self-adhesive SBS elastomeric bitumen air and vapour control layer. Fully bond to a prepared and primed substrate by means of the heat activated, self-adhesive face, applying pressure with a weighted roller. Side laps, minimum 75mm, end laps, 100mm, fully bond by heat welding with a hot-air gun and applying pressure with a seam roller. Priming of substrate must be with Langley Spray-on (synthetic rubber) Primer (bituminous primer must not be used). All heat activation and welding within the flame-free zone must be carried out with a hot-air gun. Note: All laps with main area AVCL, (outside the flame-free zone) must be minimum 150mm and torch bonded.				
4.3	Air and Vapour Control Layer - Non-combustible Detail Skirtings: Extend the air and vapour control layer as a separate flashing piece cut from full width of roll to the skirting. Fully bond by torch-on method to a fully prepared surface to a minimum height of 100mm past the finished proposed line of the new insulation level. A minimum of 100mm lap must be achieved to main field return. Side laps to be a minimum of 75mm and must be fully sealed by torch-on method.				
4.4	Flame-free Zones - Air and Vapour Control Layer - All Upstands, Skirtings & Details Generally: Extend Parevapo SA air and vapour control layer to the skirting / details as a separate flashing piece, cut from the width of a roll. Fully bond to a prepared and primed substrate by means of the heat activated self-adhesive face. Minimum height, 100mm above the finished height of the new insulation (or the full girth of details). Priming of substrate must be with Langley Spray-on (synthetic rubber) Primer, (bituminous primer must not be used). Lap to main field return, minimum 100mm, side laps minimum 75mm. Application method as per the main area. Detailing arrangements all as main specification.				

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No.	Item	Unit	Qty	Rate	Total
5	INSULATION				
5.1	Parafoam Ultra Tapered Board Insulation - Field Area: Install Tapered Parafoam Ultra Polyisocyanurate (PIR) roof insulation board. CFC/HCFC-free with zero ODP. Set out in accordance with tapered scheme drawings supplied by Langley Waterproofing Systems Ltd. Boards to be close butted with staggered joints.				
5.2	Parafoam Ultra Tapered Insulation Scheme - Sumps to Outlet Positions: Sumps to be a minimum of 500mm x 500mm square around outlet position. Form with Parafoam Ultra Polyisocyanurate (PIR) flat board insulation. Board thickness in accordance with Tapered Scheme drawing. A Langley Metal Hard Edge to be fixed to all exposed insulation edges. Bond to insulation with either low foaming PU adhesive or strapping with suitable fully bonded underlay membrane.				
5.3	Parafoam Ultra Insulation - PU Attachment: To prepared surface. Bond insulation with LangStik Solvent Free PU Adhesive. Surface of substrate must be swept clear of all dirt, debris and loose material, prior to application of the adhesive. Boards to be laid close butted with staggered joints. Note: For further information, please refer to 'Fixing Instructions' section of this specification.				
5.4	Parafoam Ultra Insulation - Dual Layer Applications: Where thicknesses in excess of 150mm are specified the contractor must allow for the installation of a second layer of boards and the additional adhesive required. All boards to be laid close butted with staggered joints with the top layer off-set from the preceding one.				
5.5	Insulation - PU Attachment - Flame-free Zones: When using Parevapo SA, in designated flame-free zones, the insulation to these areas must be bonded with LangStik Solvent Free PU Adhesive. Surface substrate must be swept clear of all dirt, debris and loose material, prior to application of the PU adhesive.				
5.6	Insulation - Changes of Levels - Metal Hard Edge: Langley Metal Hard Edge to be fixed to all exposed insulation edges. Bond to insulation with either low foaming PU adhesive or strapping with suitable fully bonded underlay membrane.				
5.7	Priming - Hard Edges to Insulation: All hard edges, metal and/or timber, must be primed with Langley Spray-on (synthetic rubber) Primer and allow to dry.				
5.8	Surface Condensation/Moisture - Application Warning: Contractor to ensure that the surface of the insulation is free of surface condensation/moisture prior to the application of the waterproofing system. Important Note: Surface condensation/moisture is particularly prevalent during cold months and during extreme hot weather.				

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No.	Item	Unit	Qty	Rate	Total
6	WATERPROOFING - UNDERLAYS				
6.1	Detail Reinforcing Strip - Requirement in Lieu of Angle Fillets: Paradiene M3 S detail reinforcing strips must be fixed at the base of all upstands, prior to subsequent membranes being installed. At a minimum of 250mm width cut from roll, apply 125mm to the horizontal and 125mm to vertical prepared surfaces. Fully bond by torch-on method.				
6.2	Flame-free Zone - Detail Reinforcing Strip - Change of Membrane: Paradiene SA detail reinforcing strips must be installed at the base of all upstands, prior to subsequent membranes being installed. Strips to be minimum 250mm wide in pieces cut from roll, applied 125mm to the horizontal and 125mm to vertical surfaces. Fully bond to a prepared (and primed if applicable) substrate by means of the heat activated self-adhesive face, applying pressure with a seam roller. Where priming is required, it must be with Langley Spray-on (synthetic rubber) Primer, (bituminous primer must not be used).				
6.3	Underlay - Self-Adhesive - Field Area: Adepar JS VV glass fibre reinforced, SBS elastomeric bitumen membrane. Top Face: fusible film. Underside: sanded between self-adhesive strips with siliconised peel-off film over self-adhesive selvedge. Fixing: by means of factory-applied self-adhesive strips. Perimeters and Openings: 500mm wide, fully bond by torching. Side Lap: 80mm determined by selvedge. End Lap: minimum 120mm. Note: The siliconised film is not fusible. Fixing Method: See Fixing Instructions. Note: 5-10mm bead of bitumen must be exuded from all laps.				
6.4	Flame-free Zone - Underlay - Change of Membrane - Flat Exclusion Area: Install Paradiene SA, polyester reinforced, self-adhesive SBS elastomeric bitumen membrane. Fully bond to a prepared and primed substrate by means of the heat activated self-adhesive face, applying pressure with a weighted roller. Side laps, minimum 75mm; end laps, minimum 100mm; fully bonded by heat welding with a hot-air gun and applying pressure with a seam roller. Priming of substrate (including insulation if applicable) must be with Langley Spray-on (synthetic rubber) Primer (bituminous primer must not be used). All heat activation and welding within the flame-free zone must be carried out with a hot-air gun. Note: All laps with main area underlay, (outside the flame-free zone) must be minimum 150mm and torch bonded.				
6.5	Underlay - Upstands & Skirtings: To be formed separately using Paradiene M3 S underlay. Cut from the width of the roll and fully bond by torching to base membrane with a minimum 100mm lap. Both surfaces being bonded must be heated and a bead (5-10mm) of bitumen extruded from all head and side laps.				

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No.	Item	Unit	Qty	Rate	Total
6.6	Flame-free Zone - Underlay - Upstands & Skirtings - Change of Membrane: To be formed separately with Paradiene SA underlay, in pieces cut from the width of a roll. Fully bond to a prepared and primed substrate (or AVCL if applicable) by means of the heat activated self-adhesive face, applying pressure with a roller. Minimum height, 150mm above the finished height of the new insulation (or the full girth of details). Where applicable, priming of substrate must be with Langley Spray-on (synthetic rubber) Primer (bituminous primer must not be used). Lap to main field return, minimum 100mm; Side laps, minimum 75mm. Application method as per the main area. Detailing arrangements all as main specification.				
6.7	Underlay to Outlet Sumps & Internal/Integral Gutters: Paradiene M3 S underlay (fully bonded) must be used (detailed elsewhere). Extend onto main field area by minimum 150mm.				
7	WATERPROOFING CAP SHEETS				
7.1	Cap Sheet - Torch-on - Field Area: Install Elastoflex GS cap sheet. Elastoflex GS is a torch-on polyester-reinforced, SBS-modified elastomeric bitumen membrane. The surface has a Dark Grey granulated surface with a grooved thermofusible film underside. Lay: Fully bonded by torching with 90mm minimum side lap width as determined by the selvedge. Minimum end laps must be 150mm. This layer is to be laid parallel to the under layer, breaking joints by at least 300mm. Both surfaces being bonded must be heated and a bead of bitumen exuded from all laps.				
7.2	Flame-free Zone - Cap Sheet - Change of Membrane - Flat Exclusion Area: Install Parafor Solo SA, polyester reinforced, self-adhesive, SBS elastomeric bitumen, dark grey granule faced cap sheet. Fully bond to the underlay by means of the heat activated self-adhesive face, applying pressure with a weighted roller. Side laps to suit selvedge (minimum 75mm); end laps, minimum 150mm; fully bond by heat welding with a hot-air gun and applying pressure with a seam roller. A 5-10mm bead of bitumen must be extruded from all laps. All heat activation and welding within the flame-free zone must be carried out with a hot-air gun. Note: All laps with main area cap sheet, (outside the flame-free zone) must be minimum 150mm and torch bonded.				
8	DETAILS				
8.1	Detail Skirtings & Upstands - Requirement: All detail skirtings and upstands must be a minimum of 150mm above the finished horizontal roof surface level, including any paving, ballast, green roof coverings etc. Important Note: If the required height cannot be achieved for any reason, then the details below 150mm will not be covered by the Langley Waterproofing guarantee				

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No.	Item	Unit	Qty	Rate	Total
8.2	Cap Sheet - General Detailing: Detail flashings. Form separately with Elastoflex GS Cap Sheet cut from width of roll. Colour to match main field membrane. Fully bond by torching to the specified detail underlay membrane. Both surfaces being bonded must be heated and a 5-10mm bead of bitumen extruded from all head and side laps. Cap sheet detail must extend to a minimum of 150mm onto the main field area. Upstand heights must be a minimum of 150mm above the finished roof level.				
8.3	Flame-free Zone - Cap Sheet - General Detailing - Change of Membrane: Detail flashings to be formed separately using matching colour Parafor Solo SA Cap Sheet, in pieces cut from width of roll. Fully bond to the specified detail underlay by means of the heat activated self-adhesive face, applying pressure with a roller. Minimum height, 150mm above the finished height of the new system (or the full girth of details). Side laps to suit selvedge; end laps, minimum 150mm, bond by heat welding with a hot-air gun and applying pressure with a seam roller. A 5-10mm bead of bitumen is to be extruded from all laps. Lap to main field return, minimum 150mm.				
8.4	Drainage - Outlet Sumps: See Underlay section of this specification for sump underlay membrane specification. At change in level from field area to sump the underlay should be dressed over the hard edge, down the face of the field area insulation and lap onto the AVCL to form a bund. An additional section of underlay should also be dressed across the top of the sump insulation, up the change in level and lap onto field area underlay by a minimum 75mm on either side of the sump. At the outlet opening the underlay should be dressed down the face of the insulation and lap onto the AVCL. Base of sump upstand to be reinforced with the appropriate detail underlay (see Detail Reinforcing Strip in Underlay section of specification) prior to installation of cap sheet. Side and end laps to be a minimum 75mm.				
8.5	Internal Drainage - ParaFurb Outlets: ParaFurb Outlet: Stainless Steel spigot with Ribseal gasket and SBS membrane flange. Select outlet to suit diameter/s of fall pipes. Fully bond flange membrane to previously installed underlay (see Underlay section for sump membrane specification) or soaker. Fully bond cap sheet over and cut hole to suit diameter of pipe. Install leaf guard/grating supplied. Installation to be in accordance with Langley fixing instructions.				
8.6	Flues and Hot Pipes with Integral Insulating Double Skin: New, code 5 lead pipe sleeve/s with integral flange. Sleeve minimum 150mm high, flange minimum 100mm wide. Prime both surfaces of the flange and fully bond between underlay or soaker and cap sheet. Top of sleeve: Protect with a weathering collar, securely fixed to pipe Base of Sleeve. Colour, black.				

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No.	Item	Unit	Qty	Rate	Total
8.7	Cable Entry / Exit Units - Proprietary J Conduit: New, proprietary J Conduit. Flanges to be primed on both sides. Fully bond between underlay or soaker and cap sheet. Base of unit: Form a fillet with silicone mastic sealant; colour, black.				
8.8	Expansion Joint - Twin Kerb - Existing: Raise existing kerbs to minimum 150mm above the finished roof surface. Cap with 18mm, class 3, exterior grade plywood fixed to one kerb side only. Prime with Langley Spray-on Primer and allow to dry. Fix ParaTrim of the appropriate profile for the site conditions to the base membrane waterproofing layer of the free overhanging edge. Complete detail with cap sheet membrane to trim.				
8.9	Parapets - ParaTrim GRP Edge Trim: Base layer and detail cap sheet layer of new waterproofing system must be carried up the vertical inner face and across the top of the parapet detail, which must be, in all cases, fully supported. Terminate to leading edge with a new ParaTrim GRP edge trim of an appropriate profile for the site conditions applied over the base layer membrane. Where required, at the ends of parapets, the waterproofing must be turned up and to the side, to allow weathering with new horizontal and vertical cover flashings. Screw fix at maximum 300mm centres into firm grounds. Butt straps are to be inserted at all joints. Surfaces of trim in contact with membranes must be wiped clean and primed with Langley Primer and allowed to dry. Note: Where waterproofing is to be installed vertically to an upstand greater than 400mm in height, then the waterproofing system is to be secured by concealed screw and pressure plate fixings. Laps must be a minimum of 160mm. Screws: Maximum 200mm centres with 5 No. minimum per sheet width. On cold roof systems it may be possible to secure membranes with nails (where substrate is appropriate). Nailing: Large headed galvanised steel clout nails set at 75mm centres in two rows 50mm apart. All fixings are to be protected from the elements by covering with waterproofing membrane. Note: Exposed costal locations require the use of stainless steel fasteners and securement at more frequent centres maximum 150mm.				
8.10	Dividing Kerb: The new system to be carried up both vertical faces and across the top of the kerb detail, and must in all cases, be fully supported.				

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No.	Item	Unit	Qty	Rate	Total
8.11	Rooflight Kerbs - ParaKerb: Flashings to be formed separately. Must be minimum 150mm above the finished roof surface. To a primed surface, fully bond underlayer and detailing cap sheet to the full height of the kerb. Secure top edge with the retaining trim provided. Please Note - Contractor must ensure the detailed rooflight schedule has been duly checked with particular regard to the type of unit and fixing instructions. No claims arising from preparation/installation error by contractor will be entertained by Langley Waterproofing Systems Ltd.				
8.12	Builders Kerb - Plant Openings: Kerb must be minimum 150mm above the finished roof surface. Flashings to be formed separately. Fully bond both base layer and cap sheet of the detailing system to the vertical face. The cap sheet only to be taken across the top of kerb. When turning the cap sheet over the top of the kerb, all corners to be mitred and side laps to be butt-jointed to present a flat plane for the subsequent fixing of the plant.				
8.13	Penetrations - Soil Vent Pipes: Soil vent pipes must be a minimum of 150mm high from the finished level of waterproofing. Install new Code 5 Lead pipe sleeves with integral lead flange. Sleeves must be a minimum of 30mm higher than pipe. Flange must be a minimum of 100mm wide. Prime both surfaces of the flange. Fully bond to the underlay or soaker, prior to fully bonding the cap sheet membrane. Sleeves to be turned into top of pipe by 25mm. Colour: Black. Note: Soil vent pipes greater than 300mm require a Code 5 Lead sleeve finishing a minimum of 150mm high above the finished level of the new waterproofing system and terminated with a weathering collar. Finish base of vertical sleeve as previously stated.				
9	ROOFLIGHTS & OPENINGS IN DECK				
9.1	ParaRange Modular Rooflights - Requirement: All Langley Waterproofing Systems Ltd Rooflights and ParaKerb Upstands are BBA accredited. Any deviation from the specification detailed below and or accompanying rooflight schedule can only be made with the approval of Langley Waterproofing Systems Ltd.				
9.2	ParaRange Modular Rooflights - Installation: All must be installed by the contractor strictly in accordance with BS 8217 and the fixing instructions provided in Detail Sheets of Agrément Certificate. When supplied as part of a total roofing package, ParaRange Rooflights are covered by all warranties and guarantees issued by Langley Waterproofing System Ltd Guarantee. Note: Installation must be carried out by an approved Langley installer in order to meet the requirements of the guarantee. See attached schedule for details.				

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No.	Item	Unit	Qty	Rate	Total
9.3	<p>ParaKerb - Installation: All ParaKerbs kerbs must be installed strictly in accordance with BS8217 and BS8218 and as per fixing instructions provided in Agrément Certificate. When supplied as part of a total roofing package, ParaKerbs are covered by all warranties and guarantees issued by Langley Waterproofing System Ltd Guarantee.</p> <p>Note: Installation must be carried out by an approved Langley installer in order to meet the requirements of the guarantee. See attached schedule for details.</p>				
9.4	<p>ParaRange Modular Rooflights - Schedule: A detailed Rooflight Schedule by Langley Waterproofing Systems Ltd will be issued at tender stage to support this specification.</p>				
9.5	<p>ParaKerbs - Fixing to Deck (Where Applicable): Screw-fix ParaKerb to roof deck. Fixings at maximum 300mm centres.</p>				
9.6	<p>ParaKerbs - Fixing to Timber Grounds (Where Applicable): Screw-fix ParaKerb into timber grounds. Fixings at maximum 300mm centres. Timber grounds must be minimum 100mm wide and the same thickness as the insulation.</p>				
9.7	<p>ParaRange Triple Skin Modular Rooflights - Installation: Triple skinned polycarbonate. Clear outer skin, clear middle skin with inner skin diffused. Installed to ParaKerb / Adaptor Kerb as required with the security fixings supplied. Upon completion of fixing install aluminium snap-on security frame. Wipe unit clean. This item must be read in conjunction with the Langley issued Rooflight Schedule.</p> <p>Note: Should the Schedule show a differing skin colour format to that shown above then the Schedule takes precedence over the specification.</p>				
9.8	<p>Aperture Linings: Internal linings must be installed/ made good as necessary and decorated in accordance with the client contract administrator's detailed instruction or specification. Claims arising from failure to seek client instruction prior to commencement of works or provide suitable cost provision for this item will not be entertained by Langley Waterproofing Systems Ltd.</p>				

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No.	Item	Unit	Qty	Rate	Total
9.9	Aperture Linings - Existing - Unchecked: Existing lining construction is unknown at this time. If confirmed to be an ACM item, under no circumstances are the internal linings to be disturbed. Any opening mechanisms/furniture etc. that are fixed through the linings are to be disconnected from the rooflight and left in-situ. The contractor must liaise with, and seek separate instruction from the client contract administrator as to the method of specialist testing and or handling of this item should a requirement for removal be necessary. Claims arising from failure to seek client instruction prior to commencement of works or provide suitable cost provision for this item will not be entertained by Langley Waterproofing Systems Ltd.				
10	SAFETY SYSTEMS				
10.1	Free-standing Permanent Guardrail System: New LangGuard Free-standing Permanent Guardrail System to be installed to the entire exposed perimeter of the completed roof. The guardrail systems shall be designed, tested, inspected, and marked to ensure it meets performance requirements and safety factors specified in BS 13700:2021. The system shall allow for safe access and egress and include suitable, secure access gates where required.				
10.2	LangGuard - Standards: All posts, rails, bases and fittings are galvanised to BS EN ISO 1461. Fully tested to Health and Safety Specialist Report 15 September 1988, 'Handrails - Maintenance Uses Only', BS6399 Buildings and Loads. See LangGuard Data Sheet DsA2 0119 for further information.				
10.3	LangGuard - Base Plates: Supporting Base Plates (with integrated bonded ribbed rubber mat): To sit flat on the roof surface.				
10.4	LangGuard - Installation: To be installed, checked and certified by Langley Waterproofing Systems Ltd.				
11	COMPLETION				
11.1	Guarantee Requirement - Final Inspection: In accordance with our guarantee requirements, Langley Waterproofing Systems Ltd are to be notified once all works are complete. A final inspection will then be undertaken by us and the contractor must ensure that safe working access is provided.				
11.2	Extractor Fans / Ventilators: Re-fix on a bead of silicone or foam strip. Use appropriate fixings with sealed caps.				
11.3	Plant and Equipment - Free Standing - Reinstatement: All free-standing roof mounted plant and items of equipment must be placed on load-spreading slabs on sacrificial pieces of loose laid cap sheet, mineral surface down.				

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No.	Item	Unit	Qty	Rate	Total
11.4	Sacrificial Layers - Free-standing Plant / Handrails etc: All freestanding items. Install a sacrificial layer of cap sheet (granule surface down) under all load spreading supports / pads.				
11.5	Cables - Reinstate: Collate and support on cable trays if necessary. Secure cables to tray or to original locations and secure with plastic cable ties. If cable trays are used then they are to be rested on load-spreading bases on sacrificial pieces of cap sheet. Securely fasten trays to bases as required.				
11.6	Rainwater Outlets - ParaFurb Outlets: Check for blockages. Clear if necessary and leave in a free-running condition. Ensure Ribseal (where present) is tightly secured to form correct pressure seal to pipe/s for applicable units. Ensure all supplied leaf guards are in place and tightly secured.				
11.7	Completed Roof Surface - General: Ensure visual inspection of all laps is undertaken to confirm integrity of system prior to final guarantee inspection. Sweep, clean and remove debris to suitable waste container.				
11.8	Arisings from Works: Remove from site all arisings for return to contractor storage or safe disposal.				

Schedule of Products

Langley Spray-on Primer - Canister

Synthetic rubber primer. Supplied as a canister (450mm x 330mm). Packaged in a cardboard carry box.

Canister content: 18.5 kg. Gross canister weight: 24.5 kg

Coverage Rates: Self-adhered systems – up to 150m² (0.12m²/kg) Torch-on system – up to 250m² (13.5m²/kg). Other components required and supplied separately include: Applicator gun and 3m hose (re-usable). Spray-tip and Spray Cleaner

Parevapo SBS Metal Lined Vapour Barrier - Roll Size: 10m x 1m

Metal-lined, double-reinforced, SBS-modified, elastomeric bitumen vapour barrier. Top Face: Sanded.

Underside: Macro-perforated fusible film. Nominal Weight: 38kg/roll.

Parevapo SA Self-Adhesive Metal Lined Air and Vapour Control Layer - Roll Size: 15m x 1M

Double-reinforced, metal-lined, SBS elastomeric bitumen vapour barrier. Top Face: resin coating, colour Blue.

Selvage: Self-adhesive with a peel-off polyethylene film; Nominal Width 100mm. Underside: Heat activated self-adhesive bitumen with a siliconised peel-off release film. Nominal Weight: 25kg/roll (1.6kg/m²).

LangStik SF Can - Solvent-free PU Insulation Adhesive

Single component moisture curing solvent free polyurethane adhesive. Packaging: 6.5kg can. Nominal Coverage: 35m²/can.

LangStik SF Canister - Solvent-free PU Insulation Adhesive

Single component moisture curing solvent free polyurethane adhesive. Container: 18.5 kg / metal canister.

Labelling: LangStik SF Canister. Nominal coverage, up to 350 m² / canister.

Parafoam Ultra Tapered Insulation

Parafoam Ultra Tapered Polyisocyanurate (PIR) roof insulation boards. CFC/HCFC-free with zero ODP. Both

Faces: Perforated mineral coated glass fibre tissue. Board Size: Variable to scheme. Cut-to-falls scheme drawings are supplied by Langley Waterproofing Systems Ltd.

Paradiene M3 S Underlayer - Roll Size: 10m x 1m

Polyester-reinforced, torch-applied SBS-modified elastomeric bitumen underlay. Top Face: Sanded. Underside: Thermo-fusible film. Nominal Weight: 36.5 kg/roll (3.6 kg/m²)

Adepar JS VV Underlayer - Roll Size: 10m x 1m

Self-adhesive, partially bonded, glass fibre reinforced, SBS-modified, elastomeric bitumen underlay. Top surface: Macro-perforated fusible film with siliconised peel-off film over self-adhesive selvage. Underside: Sanded between self-adhesive strips, protected with siliconised peel-off film. Nominal Weight: 27kg/roll.

Paradiene SA Self-Adhesive Underlayer - Roll Size: 10m x 1m

Polyester reinforced, SBS elastomeric bitumen membrane. Top Face: resin coating, colour Red. Selvage: Self-adhesive with a polyethylene peel-off film. Nominal Width 100mm. Underside: heat activated self-adhesive bitumen with a siliconised peel-off release film. Nominal Weight: 30kg/roll (3kg/m²).

Elastoflex GS (30 - Dark Grey) Cap Sheet - Roll Size: 8m x 1m

Polyester-reinforced, SBS-modified, elastomeric bitumen cap sheet with granule surface finish. Colour: Dark Grey. Selvage: Nominal 90mm with fusible film. Underside: Grooved with continuous fusible film. Nominal Weight: 47.7kg/roll.

Parafor Solo SA (Dark Grey) Self-Adhesive Cap Sheet - Roll Size: 7.5m x 1m

Polyester reinforced, SBS elastomeric bitumen cap sheet with granule surface finish. Colour: Dark Grey.

Selvage: Self-adhesive with a polyethylene peel-off film. Nominal width 100mm. Underside: heat activated, self-adhesive bitumen with a siliconised peel-off release film. Nominal Weight: 38kg/roll (5kg/m²).

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Langley Metal Hard Edge

Galvanised Steel Angle. 3m lengths x 50mm x 50mm. Thickness 0.7mm.

ParaRange Modular Rooflights and Kerbs

All Langley Waterproofing Systems Ltd Rooflights and ParaKerb Upstands are BBA accredited. Accompanying Rooflight Schedule will be supplied by Langley Waterproofing Systems Ltd.

ParaFlash B3

Non-lead Flashing System. SBS elastomeric bitumen reinforced with a core of flattened, expanded aluminium mesh. Top Face: charcoal coloured granules. Underside: polypropylene film. Roll Size: 12m (length) x 150mm (width). Nominal Thickness: 3.5mm. Nominal Weight per Roll: 7.2Kg. Nominal Weight per m²: 4Kg. Each roll is supplied with 25 No. stainless steel chase retaining clips. Chase mastic sealant (Langley Gap-Seal Mastic supplied separately.

Exterior Grade Plywood

Conforming to the relevant requirements of BS EN 636:2012 + A1:2015 Class 3 and marked BS EN 636-3. To be sourced direct from supplier.

ParaFurb Outlets

Internal rainwater outlet with 500mm x 500mm flexible SBS felt membrane attachment flange.

Spigot Depth as Standard: 400mm.

Available Sizes:

- Drain Diameter 50mm - To suit existing pipe sizes of 59mm-75mm complete with EPDM rubber Ribseal and aluminium turbine leaf guard
- Drain Diameter 62mm - To suit existing pipe sizes of 71mm-88mm complete with EPDM rubber Ribseal and aluminium turbine leaf guard
- Drain Diameter 75mm - To suit existing pipe sizes of 85mm-106mm complete with EPDM rubber Ribseal and aluminium turbine leaf guard
- Drain Diameter 95mm - To suit existing pipe sizes of 103mm-109mm complete with EPDM rubber Ribseal and aluminium turbine leaf guard
- Drain Diameter 145mm - To suit existing pipe sizes of 150mm-198mm complete with EPDM rubber Ribseal and aluminium turbine leaf guard

Additional diameter, spigot sizes and accessories are available upon request.

ParaTrim GRP Edge Trim

Available Profiles: PF55 (55mm) / PF82 (82mm) / PF107 (107mm) / PF132 (132mm) / TRM105 (105mm) notched trim. Supplied in 3m lengths.

Available Accessories: 240mm x 240mm internal and external 90° pre-formed corners.

Available Colours: Charcoal only.

LangGuard

Free-standing permanent guardrail edge protection system.

Pre-treated Timber

As recommended in BS 5268: Part 5. The treatment should be compatible with the use of bitumen-based products. To be sourced direct from supplier.

Langley Gap-Seal Mastic

For use with ParaFlash B3, termination bars and lead counter flashings to close joints. Low modulus neutral cure silicone mastic sealant. Approximately 6Lm for 10mm x 10mm bead. Supplied in 310ml tube cartridges. Colour: Black.

Code 5 (red) Rolled Lead Sheet

For use to create chutes, pipe sleeves, outlets, saddles and where specified. To be sourced direct from supplier and conform to BS EN 12588: 2006.

Fixing Instructions

Bitumen Membranes Generally

Waterproofing membranes must be installed in accordance with BS 8217: 2005, BS 8000: Part 4: 1989 and the Langley Fixing Instructions.

Membranes Generally

Lay in direction of fall. Lay parallel to the preceding layer, breaking joints by at least 300mm. Stagger end laps by minimum 300mm. In gutters, membranes to be laid lengthways to minimise laps.

Note: When lifting membrane roll weights in excess of 25kg, a two person or mechanical lift is required.

Parapet Details - GRP Trims

Over 500mm girth. Detail cap sheet, butt joint to rear edge of trim. Cap sheet cover strip: Fully bond to trim and cap sheet.

Requirement when Torching & Hot Air Applying Bitumen Membranes

Surfaces being bonded must be heated and a required 5mm-10mm bead of bitumen must be extruded from all laps and is applicable to all layers. End laps, or as details require when bonding onto granule surfaced membranes, must first be heated and the granules removed to ensure a bitumen-to-bitumen bond.

Hot Air Welding Bitumen Membranes

Both surfaces being bonded must be heated and a narrow bead of bitumen 5mm-10mm must be exuded from all laps. Laps onto granule surfaces, end laps etc must first be heated and the granules removed to ensure a bitumen-to-bitumen bond.

Spot Bonding Bitumen Membranes by Torching

Torch top of roll in a staggered spot formation as the roll is pushed forward. Side and end laps to be fully bonded by torching. Both surfaces being bonded must be heated and a 5mm-10mm bead of bitumen exuded from all laps.

Bonding Bitumen

Bitumen must not be heated to a temperature in excess of 260°C, or above its flash point minus 15°C (whichever is the lower), and should not exceed 240°C at the time of laying. **Please note** that Langley Waterproofing Systems Ltd do not advocate the use of bonding bitumen unless other means of attachment are not possible.

Adepar Self Adhesive Bitumen Membranes

Fix in dry conditions at an ambient temperature greater than 15°C. At lower temperatures, but never less than 5°C, warm the self-adhesive compound with a torch. Unroll sheet and position. Re-roll and remove siliconised release film as the sheet is fixed in position with applied pressure. Side lap is self-adhesive. Apply pressure to lap with roller if required. End lap, seal by torching: Perimeters and Opening, 500mm wide, fully bond by torching. When torching, re-roll sheet and torch as it is unrolled, whilst simultaneously removing the siliconised film. Surfaces being bonded must be heated and a narrow bead of bitumen, 5mm-10mm, must be exuded from all laps.

Flame-free Self-Adhesive Bitumen Membranes

Fix in dry, frost-free conditions and (where required) to a primed substrate. Note, primer must be Langley Spray-on (synthetic rubber) Primer (bituminous primer must not be used). Unroll membrane and set out. Re-roll and remove siliconised release film as the sheet is rolled into position, gently heating the underside with a hot air gun and applying pressure with a weighted roller. Side lap is self-adhesive (AVCL & underlay only), however in certain conditions heat may be required. End lap, bond by heat welding with a hot-air gun. Lap must be sealed and checked for security as work proceeds. Cap sheet: All laps must be heat welded and a 5 - 10mm bead of bitumen exuded. For detailed information, refer to Langley Installation Guide IG5-0917 - SA-20 Flame Free Detailing System.

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Fixings Generally - Pull-Out Tests and Fixing Types

Fixing Pull-out Tests to be carried out by; and all fasteners to be obtained from:
Fixfast Ltd, Merlin House, Seven Mile Lane, Borough Green, Sevenoaks. Kent TN15 8QY.
Phone: 01732 882 387
Email: sales@fixfast.com

Bonding PIR Insulation with LangStik SF PU Adhesive

LangStik SF PU Adhesive - Canister (18.5 kg).

Guidelines for Use: Please note: A spray-tip is not required.

1. Ensure the insulation board or other roof substrate is dry and clean from grease, dirt and other contaminants before applying adhesive.
2. Set the canister up as described in the Set-Up and Maintenance Guide.
3. Ensure the LangStik SF Canister is applying a bead of adhesive approximately 20-40mm wide.
4. Apply beads at 300mm centres in the field area and 200mm centres in exposed perimeter zones of the roof or in compliance with specific wind uplift calculations.
5. Place the insulation board directly into LangStik SF.
6. Apply pressure to the insulation board to ensure full contact with LangStik SF Canister.
7. Allow to cure before weatherproofing the insulation board.

LangStik SF PU Adhesive - Can (6.5 kg).

Guidelines for Use: Applied direct from the can. Note. Once opened, contents of can must be used. Do not re-seal.

1. Substrate to be swept clear of all dirt, debris and loose material, prior to application of adhesive.
2. Pierce can to form a 20 mm hole.
3. Apply 20mm beads at 300mm centres in the field area and 200mm centres in exposed perimeter zones of the roof or in compliance with specific wind uplift calculations. Beads to be applied in a serpentine pattern.
4. Set board into the beads within 10-15 minutes and immediately walk-in the board to spread the beads for maximum contact.
5. Repeat walking-in every 5-7 minutes, until the board is firmly attached.
6. Allow to cure before weatherproofing the insulation board.

ParaFurb Outlets

ParaFurb Outlets must not be installed to outlet positions that already have an existing refurbishment outlet in place. Any existing refurbishment outlets or lead sleeve inserts must be removed with surrounding substrates being made good prior to any new ParaFurb Outlets being installed.

Fitting Instruction for units with EPDM rubber RibSeals:

- Select the correct size of outlet to suit the diameter of the downpipe.
- Check depth of existing outlet / downpipe and, if necessary, cut spigot to length. Minimum length of spigot must be 150mm.
- Prior to installing outlet, fix in place required system underlay or underlay soaker, 500mm x 500mm.
- Insert EPDM rubber Ribseal onto the end of the spigot. Ensure Ribseal fits tightly and shoulder is in full contact with the end of the spigot. Then Insert the complete assembly into the downpipe, ensuring the stainless steel supporting flange under the membrane flange is in full contact with the underlay / soaker. Secure in position with suitable fixings and washers through the four holes provided. Fully bond the outlet membrane flange to the underlay / soaker. Where applicable, fully bond the system cap sheet to the membrane flange. Install leaf guard / grating supplied.

ParaRange Rooflights, Hatches and Kerbs

To be installed strictly in accordance with BS 8217 / 8218, Langley Rooflight Schedule and the fixing instructions as detailed in accompanying Agrément Certificate.

Exposed Substrates - General Requirement

All structural deck types and detail substrates must be kept dry at all times during the construction phase.

Station Road 3

Hybrid Roof Construction

Where applicable, in hybrid roof constructions, consideration must be given to ensuring that adequate condensation control is achieved in accordance with BS 6229: 2018 and BS 5250: 2021.

Damp Proof Course

Where waterproof skirtings and counter-flashings are being installed at a higher position than an existing damp-proof course, a new cavity tray must be installed above the new proposed finishes, especially in exposed conditions. Any damp-proof courses that are covered by Langley waterproofing membranes or roof coverings are done so purely at client risk and will not be covered by the Langley Guarantee.

General Guidance and Requirements

Drying Out - Equipment Suggestions

Commercially available equipment includes the following:

- Leaf Blowers
- Hot Air Blowers
- Roof Pumps (puddle suckers)
- Bowdry Roller

Latent Defects

All specifications provided by Langley Waterproofing Systems Ltd are written on the basis that the substrates, roof deck and structure are sound and durable. We cannot accept responsibility for the consequences of latent defects in the roof deck and/or structure.

Installation

Waterproofing systems are to be installed in accordance with BS 8217: 2005, BS 8000: Part 4: 1989 and Langley Fixing Instructions.

Hybrid Roof Constructions

Consideration should be given to ensuring that adequate condensation control is achieved in accordance with BS 6229: 2018 and BS 5250: 2021.

Building Works - Caution Note

Building works adjacent to roofing operations: It is the roofing contractor's responsibility to ensure suitable protection of semi-completed or completed works is provided should any building works be undertaken, either by the roofing contractor or others; such as cutting of chases, re-pointing, new brickwork, rendering, etc.

Leadwork

Flashings and other sheet leadwork must be carried out in accordance with the recommendations of the Lead Development Association and the Lead Sheet Association.

Protection of Works - Caution Note

Any references within this specification relating to plant, equipment or materials being temporarily removed and/or stored for use / re-use, must not be stored, during the entire course of the works, at any time, on semi-completed or completed areas unless suitable protection measures are provided beneath. No claims arising from failure to protect Langley Waterproofing Systems Ltd installed products will be entertained.

Damp-Proof Courses / Cavity Trays

Where there is no existing damp-proof course, or where the skirtings and/or counter-flashings are being installed at a higher level than the existing D.P.C., a new cavity tray should be installed, especially in exposed conditions. Where tops of new waterproof skirtings will be above the line of the existing damp-proof course or cavity tray, it is a requirement that the contractor makes suitable provision to renew and raise these to a higher level. The contractor must liaise with, and seek separate instruction from the client contract administrator as to the method of raising these details. Any damp-proof courses that are covered by Langley waterproofing membranes or roof coverings are done so purely at client risk and will not be covered by the Langley Guarantee. Claims arising from failure to seek client instruction prior to commencement of works or provide suitable cost provision for this item will not be entertained by Langley Waterproofing Systems Ltd.

Exposed Openings - Caution Note

It is solely the contractor's responsibility that any exposed openings created during the construction phase; removal of rooflights / structural glazing, ducting, replacement of deck substrates, etc. must be temporarily and fully protected at all times to protect workforce and building occupants. Furthermore, any and all openings must be made watertight at the end of each working period.

Station Road 3

Langley Felt Membrane Systems - Storage

Rolls of Langley waterproofing are to be stored under cover, on end, on a flat firm surface and, if outside, clear of the ground or supporting surface and sheet covered.

Unforeseen - Deleterious Materials

During the construction phase, any exposed or discovered unforeseen deleterious materials must be notified immediately upon finding to the client contract administrator and Langley Waterproofing Systems Ltd to await further instruction before works proceed. No claims arising will be considered through failure to report such findings.

Prepared Surfaces - Requirement

Prepared surfaces and substrates to receive new waterproof coverings must be prepared all in accordance with detailed specification notes contained herein and must be swept clean of all dirt, debris and loose material. In addition, all surfaces must be dry.

Upstand Skirtings - Requirement

For guarantee purposes, all upstand and skirting details must be a minimum height of 150mm above the finished roof surface level.

Upstand Skirtings - Requirement

It is the contractor's responsibility to ensure that any and all details found to be below the required 150mm requirement are raised to accommodate the extra thickness created by the new waterproofing system. No claims arising from failure to do so will be entertained by Langley Waterproofing Systems Ltd.

Perimeter Kerbs - Requirement

It is the contractor's responsibility to ensure that any perimeter non-watershed check kerb details meet the 50mm height requirement. The contractor must raise any perimeter kerbs where necessary to accommodate the new finished levels created by the new waterproofing system. No claims arising from failure to do so will be entertained by Langley Waterproofing Systems Ltd.

Langley Insulation Products - Storage

All insulation materials **must be** stored under cover. Plastic wrappings should not be considered to be sufficient protection for storage outside. If stored outside, insulation materials should be adequately protected with tarpaulins / sheeting and also be clear of the ground or supporting surfaces.

Completed Works Protection

Each layer of the installed Langley waterproofing system **must be** protected from any following trades, foot traffic, or other sources of damage during installation and other construction work. Where necessary, appropriate protection, such as new plywood sheets, must be provided.

Fire Safety

The Roofing Contractor is to provide adequate fire extinguishers and fire safety measures throughout the duration of the contract period.

Protection of Internal Outlet Positions - Requirement

All outlets must be temporarily covered throughout the contract period to prevent debris entering the outlet / drainage system. Covering to be such, that water run off is not impeded at any time.

Safe Working

All works are to be carried out in accordance with current Health and Safety Legislation.

Inclement Weather Protection

All necessary measures and allowances **must be** made for protecting the works from damage due to inclement weather. The contractor must ensure at the end of each working day or period, that any exposed membranes or substrates that are susceptible to damage through water ingress are sealed with a Langley system compatible membrane to ensure complete water tightness. No loose laid membranes or other such covers are permitted.

Station Road 3

House Keeping

The Roofing Contractor is to maintain and keep the site tidy at all times. All debris, wrappers and surplus materials, etc. to be removed from the site each day or deposited in secure storage.

Gas Cylinders

Remove from roof levels at the end of each working day and store in a secure compound designed for the purpose.

Temporary Removal - General

Roof mounted plant and equipment to be temporarily removed and set aside for re-fixing upon completion. No plant and equipment is to be stored on semi-completed or completed areas of new works during the course of the contract unless suitable protection has been provided beneath.